





The Chat

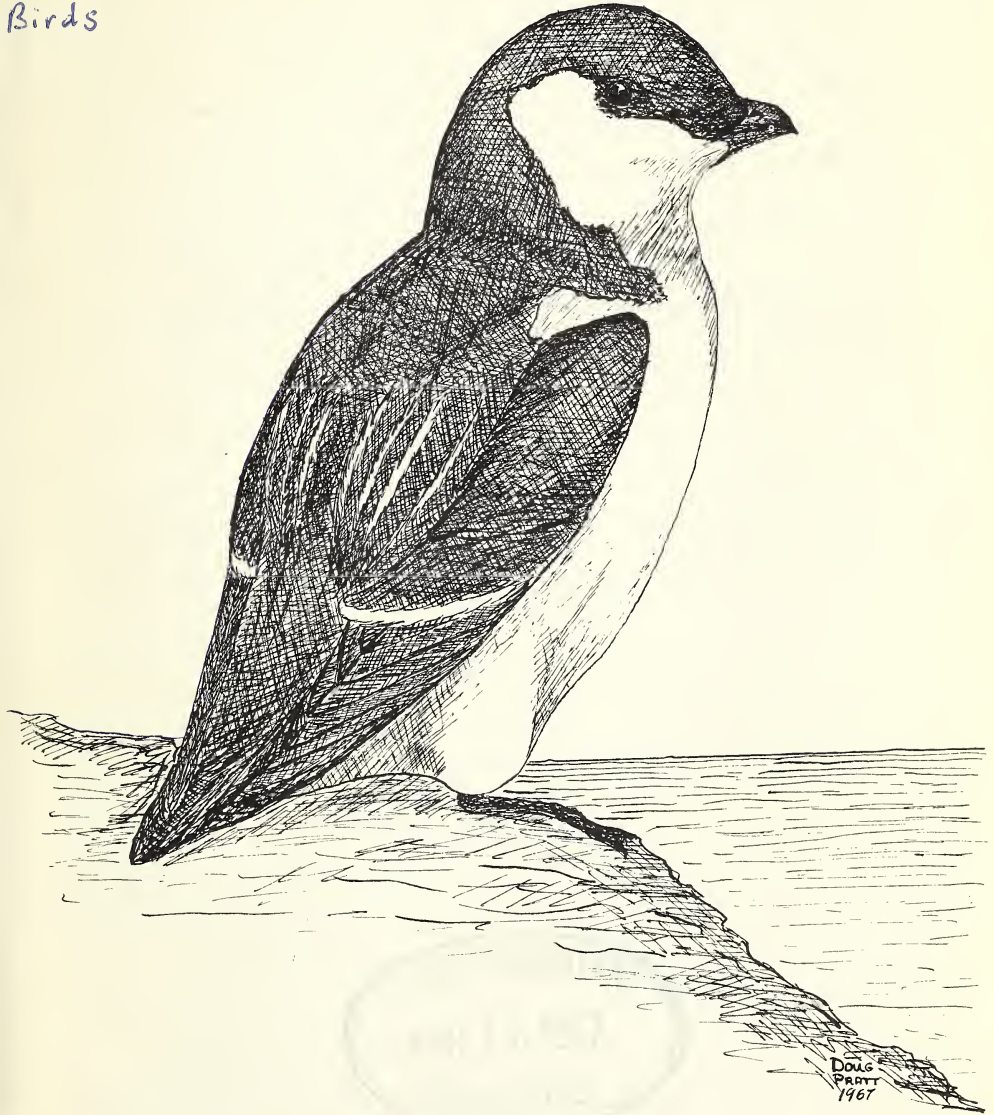
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The Chat

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OUR COVER—The winter of 1966-1967 has been marked by an unusually large number of Dovekie reports from coastal North Carolina. Douglas Pratt of Charlotte, N.C., recorded his sighting of these small pelagic birds in a drawing which appears on our cover.

RELATIVE REPRODUCTIVE EFFICIENCY OF ADULT AND SUBADULT PURPLE MARTINS

JOSHUA A. LEE

Adult (birds 2-years-old or older) and subadult (1-year-old) male Purple Martins are easily distinguished in the field. Adults are colored the familiar all-black, whereas first year birds resemble adult females in coloration, that is to say they are dull on the dorsal surface and various shades of pale gray on the belly. Year-old males may be distinguished from females by their larger head, by a tendency for the throat to be darker, and by certain behavioral traits. While perched in a colony year-old males, like adult males, frequently fluff their feathers and flick their wings while rendering the "male song," a vocalization which females are apparently incapable of delivering.

A significant difference in the behavior of the two age groups is the fact that adult males migrate earlier than subadult males. I have seen an adult male at my site in west Raleigh, North Carolina, as early as 1 March. Commonly all males that will have an opportunity to nest in an established colony will have arrived by the first week in April. These males are usually accompanied by a like number of females. Presumably these females are of an age group comparable to the males, but I have no certain knowledge of this. There is evidence that the pair bond is established when the birds arrive or shortly thereafter. Subadult males, on the other hand, rarely arrive before the first of May. Accompanying these young males are females which are generally lighter in color than the females which arrive with the adult males. These could be year-old females since I have noted that fledgling martins are almost always lighter in color than their similarly patterned mothers.

Because of their late arrival, subadult martins rarely find any breeding sites unoccupied in an established colony. However, if the chance avails itself, they will mate and attempt to rear broods. The largest number of subadult males engaged in nesting activities may be seen around new colonies or colonies in which potential nesting sites have been increased. When subadults are able to nest, their reproductive success is markedly lower than the level noted for adults. Herein reproductive success is defined as the average number of young flown from the nest per mating. The fate of the young from this point on is only poorly known. Broods tend to revisit the colony as family units for at least two weeks after leaving the nest. The number of young noted in such revisiting units suggests that survival during the period immediately after the nest is abandoned is high. Moreover, there is good reason to believe *a priori* that high survival of young in martins is necessary in order to insure continued survival of the species since the birds are single brooded, rarely produce more than four young per brood, and exploit a restricted nesting niche.

During the nesting seasons of 1959, 1960, and 1961, data on nesting success were carefully recorded. Over this interval 41 pairs nested or attempted to nest in the colony. The male members of 31 of these pairs were adults. These 31 pairs produced an average of 3.42 young per mating. Only two pairs met with complete failure, and one of these had their brood destroyed by a cat. Among the 10 pairs in which the males were subadults, five met with total failure and the remaining five produced 20 young for an overall average of two young per mating. An examination of the failures proves instructive. Two pairs started nests but produced no eggs, two more pairs produced clutches which failed to hatch, and one pair seemingly abandoned partly fledged young.

Records kept in subsequent years on nesting success of adults show that an average of between three and four young reared per mating for all nesting attempts is the rule. The most common cause of failure of reproduction in adults is failure of the clutch to hatch. Other failures are occasioned by such day to day

hazards as loss of one or more parents, destruction of brood by predators (rare), and drowning of young during heavy rains. During June of 1963 most of the broods were lost during an exceptionally heavy rain. Renesting made up for much of this loss. However, as stated before, martins are usually single brooded; consequently, if even a single nestling survives such a catastrophe, the survivor is reared out and there is no attempt to renest.

Thus it appears that no aspect of the behavior of adult parental birds can be singled out as a causal agent of such failures unless occasional females are habitually delinquent in their incubation duties. Observation of brooding females does not suggest that this is the case. Hatching failures could possibly be attributed any one of, or a combination of causes, many of which could pertain to the environmental conditions experienced in a given year. Sterility as an expression of inbreeding depression is a possibility as I have noted that the number of hatching failures has increased in recent years. Moreover, for the first time since 1960 there were not enough adult males present to occupy all of the 20 nesting chambers which have been provided, yearly, beginning in 1960. Populational decline is suggested. The level of inbreeding in a semi-closed colony oscillates with time. Populational decline, whether because of inbreeding depression or any other agency, encourages in-migration, with the result that the problem of inbreeding is allayed for a time at least.

Reproductive breakdown among subadult birds apparently occurs at all stages of mating and nesting. Such breakdown may, in part, be causally related to certain aspects of behavior. Subadult males rarely engage in the prolonged courtship rituals and displays noted in adult males. These rituals and displays on the part of adults have many of the aspects of group behavior and commonly involve the entire colony at one time or another. Such group behavior undoubtedly functions to strengthen the pair bond of individual matings and seems important in allocating territories with the least amount of strife among the individuals involved. Subadults have no opportunity to engage in such group behavior since it is usually completed before they arrive. All in all subadult males seem to enjoy little status in the colony, for, although ignored by adult males, they are frequently harassed by mated females.

The plumage color of adult males, undoubtedly a product of sexual selection, must serve as a recognition device for females, since females attack other females and subadult males but not mature males. Adult males attack only other adult males and then only if the nesting chamber or the perching area adjacent to it is invaded. Inability of females to consistently recognize subadult males must lead frequently to a disharmonious relationship within the pair bond with the result that reproductive breakdown is of frequent occurrence.

The earlier spring migration of adult males most certainly functions to maximize utilization of a vital resource present in limited supply, namely, nesting space. Whether or not the different migration periodicities of the two age groups are causally related in this context is an intriguing question which remains to be answered.

5104 Newcastle Road, Raleigh, North Carolina

BREEDING BIRD STUDY AT CHAPEL HILL, NORTH CAROLINA

WILEY B. SANDERS

For several years the author of this paper has spent a considerable portion of his spare time looking for bird nests and trying to determine whether the young left the nest successfully, or failed to do so for a variety of reasons. The area covered in this study includes mainly the woods and fields around the author's home on the southwestern edge of Chapel Hill, North Carolina, Bennett's woods across Morgan Creek and west of Highway 501, and outlying University lands southeast of town known as the Mason Farm and the Finley Golf Course. A few nests were found inside Chapel Hill, one a Robin nest on Franklin Street about 25 or 30 steps from the town's main intersection in the business area. The time covered was the 1965 nesting period, from the last week in March when a Carolina Wren nest with eggs, and a Mourning Dove nest with young were discovered, until the first week in August when an American Goldfinch nest with one egg was found. The nests were accepted as they were discovered. No attempt was made to have a balanced distribution of nests among the species. As a result there was over-representation of some species. The Wood Thrush was most frequent with 13 nests, followed by the Cardinal with 11, the Red-eyed Vireo and the Eastern Phoebe with 6 nests each.

At the outset the author had a tentative goal of one hundred nests to be included in the study. When it was found that this number would be most difficult to find there was a tendency to concentrate on those species with nests most easily found, hence the larger number of Wood Thrush and of Cardinal nests, as compared with nests of Rufous-sided Towhees and Hooded Warblers.

The criterion of success of a nest in this study is that at least one young bird left the nest safely. The nest was adjudged a failure if all eggs and young were destroyed, or the nest was abandoned by the parent birds before the eggs were hatched or the young able to fly. In a considerable number of cases the outcome of the nest could not be determined as either a success or a failure, and had to be listed as unknown outcome. This was especially true of the Red-eyed Vireo nests which usually were located so high up, and with such deep cups that it was impossible from the ground to see whether they contained eggs or young, or to determine the stage of incubation or growth of young. Even when the nest was known to contain young it was impossible to learn if they left the nest safely, due to the over-abundance of squirrels and Blue Jays which regard young nestlings as choice tidbits.

In only a few cases were the young observed actually leaving the nest. In a number of instances the young were observed on a certain day as being on the verge of leaving the nest and the following day the nest was empty but otherwise undisturbed. In such cases it is a reasonable presumption that the young left the nest safely. Such judgments were reinforced frequently by seeing the young birds in the immediate vicinity of the nest within a few hours (Wood Pewees, Robins, Eastern Bluebirds, Rough-winged Swallows, Barn Swallows, etc.). In most cases the success or failure of a nest is not susceptible to proof in an absolute sense. The most that can be said is that the judgments used were based on the weight of the evidence, and were without conscious bias.

A total of 87 nests were found embracing 32 species. The distribution by species is given in Table I. According to the criterion of success indicated earlier 33 nests were listed as *successful*, 37 were listed as *failures*, and in 17 cases the outcome was *unknown*. It is obvious that the number of nests by species is too small for any significant conclusion to be drawn. It may be pointed out, however, that of 13 Wood Thrush nests found, 9 were listed as failures, 3 as successful,

TABLE I. *Species of birds found nesting in vicinity of Chapel Hill, N.C., in 1965.*

<i>Species</i>	Successful	Failure	Unknown	Total
Bobwhite		1		1
Mourning Dove	2	2		4
Yellow-shafted Flicker			1	1
Pileated Woodpecker	1			1
Red-bellied Woodpecker	2			2
Eastern Phoebe	3	2	1	6
Acadian Flycatcher		1		1
Eastern Wood Pewee	2	1		3
Rough-winged Swallow	1		1	2
Barn Swallow	1			1
Blue Jay			1	1
Carolina Chickadee	2			2
Tufted Titmouse	1			1
Carolina Wren	3	1		4
Mockingbird	1		1	2
Brown Thrasher	2	1		3
Robin	1	1		2
Wood Thrush	3	9	1	13
Eastern Bluebird	4			4
Yellow-throated Vireo		1		1
Red-Eyed Vireo		1	5	6
Prairie Warbler		2	1	3
Hooded Warbler			1	1
House Sparrow	1			1
Red-winged Blackbird		1		1
Summer Tanager	1	1		2
Cardinal	1	6	4	11
Blue Grosbeak		1		1
Indigo Bunting	1	2		3
American Goldfinch		1		1
Rufous-sided Towhee		1		1
Field Sparrow		1		1
Totals	33	37	17	87

and 1 unknown as to outcome. Of 11 Cardinal nests only 1 was listed as successful, 6 were failures, and 4 were unknown. All 4 of the Eastern Bluebird nests in boxes were successful.

In 31 out of the 37 nest failures the cause of the failure could not be definitely established, although the large number of Blue Jays and squirrels in the area covered bring them under suspicion as the probable culprits. It should be added, however, that in no case in this study were Blue Jays or squirrels seen in the act of destroying eggs or young. Proof of the cause of failure was clear-cut in 6 out of the 37 failures. A Bobwhite nest was destroyed and the eggs broken or scattered by a mowing machine; an Eastern Phoebe nest under a bridge was washed away by high water in Morgan Creek; young Blue Grosbeaks died in the nest from exposure to rain and unseasonable cold; an Eastern Wood Pewee nest and a Wood Thrush nest were blown out of trees by storms; and the last young Robin in a nest was eaten by a black snake.

It should be pointed out that in a number of cases where the nest was on or near the ground, and easily accessible, photographs were made of the nest and

(Continued on page 6)

CONSERVATION

. . . AND THE CAROLINAS

MARIE B. MELLINGER

Miss Gladys Buckner has done such an outstanding job of the conservation news, that it is with some trepidation that I attempt to take over this department. For one thing, there are so many definitions of conservation, from the all-out concept of preserving an inviolate wilderness, to the propagation of game and fish for the benefit of sportsmen, that it is difficult to know what to exclude or include.

Especially pertinent just now is the topic of preservation of certain birds and animals. The third edition of *Rare and Endangered Species of Fish and Wildlife in the United States*, Resource Publication 34, has just been issued and lists 331 species, subspecies and races. Already on the way to extinction are the Bald Eagle, the Bachman's Warbler, and the Ivory-billed Woodpecker. On the endangered and peripheral list are the Eastern Brown Pelican, American Osprey, Wood Ibis, Hudsonian Godwit, Southeastern Pine Grosbeak, Ipswich Sparrow, Eskimo Curlew, and the Alligator, the Green Turtle of the sea coasts, the Pine Barren Frog, and the Bog Turtle of North Carolina. One seldom thinks of fish as becoming extinct, but this book lists such local North Carolina fish as the Shortnose Sturgeon of Salmon Creek, the Kanawha Minnow, and Sharpnose Darter, and the Waccamaw Killifish and Silversides.

The endangered species bill (H.R. 9424) was signed into law by the President on 15 October 1966. In signing this bill, President Johnson referred to it as the "Endangered Species Preservation Act." This bill gives certain powers to the Secretary of the Interior and the Fish and Wildlife Service to initiate a program for "protection, conservation, and propagation of endangered species." The President urged "all individuals, organizations, and agencies to participate in national effort to preserve our native fauna."

The fifth annual of the Cornell Laboratory of Ornithology for 1966, *The Living Bird*, edited by Olin Sewall Pettingill Jr. and Douglas Lancaster, has recently been issued. Of special interest to all Carolinians should be Brooke Meanley's comprehensive article on the habitat of the Swainson's Warbler. Much of Mr. Meanley's research was carried on in the Carolinas, and while the Swainson's is not yet on the list of rare and endangered species, anyone reading this fine account of its rather limited habitat must realize that continued destruction of such habitat will leave fewer and fewer nesting sites for the coastal Swainson's. Perhaps this has been the trouble all along, the need to recognize the danger to a species or race before it becomes necessary to place it on a special list. By then it may be too late. Perhaps we need to study more about the vanishing habitat of such birds as the Red-cockaded Woodpecker, to cite just one example.

A new book, *Last Chance On Earth*, by Roger A. Caras discusses in some detail 40 animals in danger of extinction, including the Ivory-billed Woodpecker. Another book, recently reviewed in Conservation News is *The Last Eagle* by Dan Mannix. It is described as a "fictionalized biography of an eagle," and although anthropomorphic by the author's own admission, he hopes it will enlist support and protection for the eagle. Incidentally, Conservation News can be had free of charge by writing to the National Wildlife Federation, 1412 Sixteenth St., Washington 20036, DC, and sending your name, address, and zip code number.

Also timely is *Conservation in Action*, prepared by the Isaak Walton League, a manual of conservation education for teachers, women's groups, scouts, or any conservation-minded organization.

Amid the rising and righteous written and spoken clamor about rare and endangered species of birds and animals, one or two lone voices have been raised in a vain effort to protect a rare and endangered plant, the Oconee Bells (*Shortia galactifolia*). Almost the entire South Carolina part of its very limited range will be destroyed by backwaters from the proposed Keowee-Toxaway power complex. A search for the one station listed in neighboring Georgia failed to reveal any *Shortia*. Perhaps North Carolina residents will be wise enough to preserve some natural *Shortia* habitat in a reserve or sanctuary before it is too late. Perhaps we need a listing of rare and endangered species of plants including the Southern Silverbell (*Halesia diptera*), and the Climbing Fern (*Lygodium palmatum*), the Walking Fern (*Camptosorus rhizophyllus*), the Fever-bark (*Pinckneya pubens*), and the Ladyslippers (*Cypripediums*) and other wild orchids. Perhaps some of our readers would help compile such a list, and work for the protection of these species.

On Hilton Head Island, an Island Wildlife Preserve has been created, under the leadership and inspiration of Mrs. Caroline Newhall. The Preserve has been made in a unique natural area of bay-gall, and pocasin, and with the addition of a large pond, provides both sanctuary for wild life and a preserve for orchids and other rare plants, and preserves an ecological setting for both use and beauty. This project was begun in 1965, and already is providing an interesting area for birding and botanizing.

BREEDING BIRD STUDY

(Continued from page 4)

its contents by a friend photographer. In the course of setting up the tripod, even though every reasonable precaution was taken, weeds and bushes under the nest were trampled or disturbed to some extent, which could easily arouse the curiosity of a prowling predator and lead to the discovery and destruction of the nest. Also, in the course of visiting the nest from time to time to check on its progress a more or less obvious path was made. Unintentionally and in some cases unwittingly, the author himself may have been a contributing factor to the failure of a certain number of the nests. This of course is regrettable. But as a result of this calculated risk more information has been secured about nesting birds, and a series of vivid and artistic color photographs of nests, eggs and young of Chapel Hill birds are now available.

SUMMARY OF 1966 FOLLOW-UP STUDY

The breeding bird study at Chapel Hill was continued by the same investigator during the 1966 season, with the result that 139 active nests were found, or 141 nesting pairs, since two of the nests were also used by Brown-headed Cowbirds. The number of species involved was 38. The four most frequently found nests were Wood Thrush (22), Cardinal (15), Robin (12), and Eastern Wood Pewee (9). Of the total nests found, 67 were listed as successful, 53 were listed as failures, and in 19 cases the results were unknown or subject to doubt as to outcome. The percentage distribution shows 48.2% successful, 38.1% failure, and 13.6% unknown.

Unusual nests for Chapel Hill in the 1966 study were those of the Orchard Oriole, Prothonotary Warbler, Barred Owl, Loggerhead Shrike, and American Goldfinch. One surprising result in this study was that two of the Eastern Wood Pewee nests in which young were reared successfully in 1965 were used again in 1966, with success in one case.

606 Coolidge Street, Chapel Hill, North Carolina

Backyard Birding

ANNIE RIVERS FAVER
Department Editor



More About Honey and Hummers

An item in the December 1966 *Chat* advising against the feeding of honey to hummingbirds has prompted many readers to inquire about certain details not explained in the quotation from *Flower Grower*. We refer you to John Vosburgh's column "The Editorial Trail" in *Audubon Magazine* for September-October 1965 and to Marston Bates' column "A Naturalist at Large" in *Natural History* for March 1967. The latter publication is the journal of the American Museum of Natural History in New York City.

Both writers cited the research of Dr. Augusto Ruschi of Brazil. His report was published (in Portuguese) in the *Bulletin of the Museum of Biology*, Santa Terese, Brazil. Dr. Ruschi described a fatal sickness in captive hummingbirds caused by a fungus which affects the tongue of the bird and sometimes the pharynx and larynx. He stated that the fungus causing this disease is "very commonly found in honey, and for that reason we do not recommend its use in any food for hummingbirds."

Mr. Vosburgh concludes his column by giving a fortified sugar water formula supplied by Paul W. Colburn, director of the Tucker Bird Sanctuary in Orange, California. It calls for 28 ounces of white cane sugar in one gallon of water with $\frac{3}{4}$ ounce of Super Hydramin powder. Mr. Bates gives a different (and more difficult to prepare) formula which he uses for his captive birds. Regardless of the formula used, the feeding tubes should be cleaned thoroughly before each refilling.

And What About Peanut Butter?

Several readers have informed this department that a telephone caller on Bart Ritner's "Bird Watching Society" (WPTF-AM, Raleigh, N.C., weekdays at 3:15 PM) cautioned against the feeding of peanut butter to birds. He stated that it causes infertility of eggs, but he did not cite a source of information. Since the caller did not give his name, we have been unable to make further inquiries. Maybe one of you readers can find out the facts for us.

Bird Revival . . . Don't Freeze a Live Bird!

Col. Norme Frost sent in a clipping of an article by Carol Grenell from their *Tryon Daily Bulletin* in which she wrote of a party held by members of the Tryon Bird and Nature Club. The subject of birds hitting the window pane and being found lifeless on the ground was the topic of interest. To a casual observer, the bird appears to be dead and is then consigned to the freezer for further study.

Mrs. J. E. Crawford says this might be done when the bird is only suffering from shock. The spring and fall migration periods are the most hazardous, but if one is alert to the sound of a bump on the window, the bird can be rescued quickly. During this time, Mrs. Crawford had revived from five to six birds a day, including hummingbirds.

Her method is to place the bird on its back in a warm turkish towel, dip a soft tissue in cold water and gently stroke the bird's head. If it doesn't revive soon, dribble a few drops of cold water on the head, always keeping the body warm. By this time, the eyes may open, but the bird may still be in shock. You might then turn the bird over and try a drop of water on its bill. It takes from five to fifteen minutes to revive, but when it shows signs of animation, place it outside on a place safe from enemies. This should be done before the bird can be frightened by finding itself confined.

While the large window pane is a constant source of trouble to migrating birds, those that have taken up residence, either for raising their families or for winter feeding, appear to recognize the hazard and avoid it. If any accident of this kind should happen, Mrs. Crawford's method is well worth trying. It must be a tremendous satisfaction to feel life returning to the small body.

How Many Orioles Have You?

Mrs. John W. Whitlock of Albemarle, N. C., reports on the Baltimore Orioles as follows:

"Thought I'd better keep you posted on the Baltimore Orioles. For the ninth winter they are here and at the other neighbors who are feeding them. This year, we have counted as many as *thirty-four* at one time. It seems that there are no others anywhere in the county, as thirty-two observers on the Christmas Count saw none, except in West Albemarle, our neighborhood.

"They have really become a part of our family in winter. They love anything with fat or sweets in it, rotten apples or bananas, but will eat oranges only later in spring. They sit in our maple trees and drink the sap which starts oozing out about January. I have never seen one drink any water or rarely take a bath."

The Mockingbird, Gourmet or Glutton?

Marie B. Mellinger, R 1, Hardeeville, S.C. writes:

There is something about a Mockingbird that appeals to the imagination. This bird does so many things in a different manner from other birds, both by means of its imitative vocal powers and its antics of courtship and feeding.

In its feeding habits the Mockingbird is omnivorous, devouring both vegetable and animal matter in an indiscriminate manner. In an effort to make a study of the Mockingbird's eating habits, we first read all the accounts we could find by leading ornithologists and reports in the ornithological magazines.

In the *Birds of South Carolina*, by Sprunt and Chamberlain, they wrote, "the Mockingbird's diet is chiefly vegetable; berries (of the palmetto, the wax myrtle, the gall berry and the butterfly bush), figs, and wild fruit form the bulk of its food. On the coast in winter it subsists largely on the chinaberry (Pride of India). It consumes only a few insects, termites, and spiders, on occasion."

Alice Lounsberry wrote that "the Mockingbirds greedily eat yucca seeds and also effect their distribution." Dick Neidhart wrote in *Audubon Magazine* in September 1952 that "in days of open radiators the Mockingbirds ate bugs from these in the University of Florida parking lot." In *Bird Lore* for 1923, Alice B. Harrington listed the Mockingbird's diet as "prickly ash berries, mulberries, cherries, tomatoes, and peaches, grasshoppers, suet, pecans, and milk from the dog's pan." At Palm Beach, Florida, Cynthia Kuser wrote that the Mockingbirds ate apples, bananas, oranges, palmetto berries, and chocolate peppermints left outdoors by mistake.

In *Audubon Magazine* for March 1943, Alexander Sprunt Jr. wrote, "their diet is wide and varied, ants, bugs, beetles (including curculios), caterpillars, and grasshoppers." Hervey Brackbill, in the *Auk* for July 1947, stated that the Mockingbirds ate Japanese beetles. At Spartanburg, South Carolina, Verne Davison said the Mockingbirds ate berries of *Eleagnus* in October. In Baltimore there was a record of Mockingbirds eating the petals and stamens of apple blossoms. In 1955 a list of fruits to attract Mockingbirds included grapes (wild), high bush cranberries, barberry, and bittersweet.

Still other lists include cotton boll weevils, ants, bees, chinch bugs, cottonleaf worms, crayfish, sowbugs, snails, lizards, and small snakes. It is said that animal food comprises about 47% of their diet, mostly in May. Other vegetable foods include wild plums, holly berries, smilax berries, woodbine seeds, blackberries, pokeberries, elderberries, fruits of sour gum, sumac, poison ivy, red cedar, and prickly pear. They are said to eat nightshade berries until they become intoxicated. The berries of beautyberry, *Callicarpa*, are a favored article of diet. In Florida they are said to eat red peppers, *Capsicum frutescens*.

During the winter months, four Mockingbirds lived in our back yard, near Hardeeville, South Carolina. They were seemingly unafraid of us, but showed a great deal of animosity toward our two cats, diving at them, with fierce cries, whenever the cats ventured into the yard. For four months we kept a sort of record of what these birds ate, and finally it became a sort of game to see how many different foods they would go after.

On January 1, one Mockingbird was feeding on the dried berries of the lantana bush (*Lantana camara*) by the back step. Later it was observed pecking at the seed heads of yucca, and eating the berries of the tallow tree (*Sapium sebiferum*). We threw out some dried bread and all three birds started to carry bits and pieces away.

On January 2, we put out food for the birds, and a Mockingbird ate some hopping-john (a rice-bean mixture). Another Mockingbird chased the cats from a pan that had contained fried chicken. Again birds were observed in the lantana and the tallow tree.

On January 10, two Mockingbirds were feeding in the tallow tree, and on the dried berries of virginia creeper and pepper vine on the fence. They also ate bread crumbs and oatmeal.

On January 15, Mockingbirds were feeding in tallow tree and in the thick red cedars (it was very windy weather). We put out bread and some hard chocolate chip cookies. The cookies were carried away before the bread crumbs.

January 18. Mockingbirds were eating frozen *Callicarpa* berries and bread crumbs.

January 22. We had read in *Audubon Magazine* that the Mockingbirds liked the multiflora rose hips. We brought some back from a trip up country and scattered them for the birds, but the Mockingbirds ignored them in favor of Ritz crackers and chocolate cake.

By January 26 the tallow tree had been entirely denuded of berries. One Mockingbird pecked at the berries of the chinaberry, but in a very half-hearted manner. Three birds fed on bread crumbs, and the crumbs of cat-chow. One Mockingbird was observed in the laurel cherry (*Prunus caroliniana*) pecking at berries.

On January 30, all four Mockingbirds were carrying away bits and pieces of pizza crust. So too, did the Boat-tailed Grackles, Red-winged Blackbirds, and Eastern Meadowlarks.

On February 6, we were feeding the cats in the backyard. One Mockingbird chased the cats away and ate a large quantity of "original ocean fish flavor cat food." Two Mockingbirds were again eating berries of the cherry laurel, and one was observed in the red cedar tree.

(Continued on page 28)

Ring-necked Duck	886	8	101	35	*	25	65	107	1	120	15		27	131	80	60	6	5	100	
Canvasback	1926	21	18	50	1504	200	86	14	22					1			3		1	
Gull Scap	122						38	84												
Lesse Scap	1926	3		34	843	57			1	7				22	41	7	8			
Scap (sp. ?)	2852		1		2603			200												
Common Goldeneye	12	3	* 4	136	80	65	220	2	4		3			180	34	48		3	2	2
Bufflehead	813	29				2			1											
Oldsquaw	3																			
Harlequin Duck	1		1																	
Common Eider	1																			
White-winged Scoter	6		*	6																
Surf Scoter	115				1	14	6	43	24	27										
Common Scoter	439	7	*	400	30				2		*									
Ruddy Duck	1866	51	56	29	301	1	11	263	104	947	1			94	1	7				
Hooded Merganser	262	15	1	5	79	34	2		57	2	2			7	49	3	2	1		3
Common Merganser	13						10							3						
Red-breasted Merganser	1161	48	85	109	160	32			720							2			5	
Turkey Vulture	197	*			1	94		8	1	3					20	1	25	5	21	2
Black Culture	233			1	8	204			1	7	8								4	
Sharp-shinned Hawk	12			1	1	2			1						2	1			1	2
Cooper's Hawk	20			3			5	1	*	1					2	2	1	1	1	1
Red-tailed Hawk	118		*	6	13		2	1	4	2	2	1	2	8	3	5	13	5	6	8
Red-shouldered Hawk	38	1		5	3	6	2		2	1	1		3	1	2	2	2	2	1	1
Broad-winged Hawk	1														1					2
Rough-legged Hawk	2																			
Bald Eagle	1				1															
Marsh Hawk	68	11	3	5	8	10	2		1	3	1		5		1	2	1	1	4	1
Osprey	3		*	1		*			1											8
Peregrine Falcon																				
Pigeon Hawk	4	2															1			
Sparrow Hawk	314	9	8	22	8	76	28	24	15	23	12	10	9	7	6	3				1
Ruffed Grouse	12																			1
Bobwhite	926	23	9	26	40	68	50	21		30	7	7	1	12	5	26				12
Ring-necked Pheasant	13																66	70	89	96
Turkey	14			4			10										33	74	40	51
King Rail	10																			1
Clapper Rail	46	7	10	5	4	20														1
Virginia Rail			*														1			
Sora	19			2		1														
Common Gallinule		1		15	2															
American Coot	2899	128	*	353	1004	14	1	451	2	10		12		21	4	332	20	507	1	6
American Oystercatcher	424		3	6	6069	6														1
Semipalmated Plover	32	1	2	68	205	151														
Piping Plover	528	9	32	41	12	8	8	13	17	85	2	12	12	21	9	28	3	47	13	26
Killdeer																	6	3	44	13
																			9	31
Black-bellied Plover	285	25	9	89	99	63														
Ruddy Turnstone	160		3	13	81	63														
American Woodcock	32		1	8	1	3	4			2		4		1	2	1	1	3		1
Common Snipe	196	3	4	2	63	3				3	3	4	2	1	14	11	16	1	1	8
Long-billed Curlew	1				1															22

[illegible]

CHRISTMAS
BIRD COUNT—1966

CHRISTMAS BIRD COUNT—1966	COAST				COASTAL PLAIN										PIEDMONT										MTN						
	Bole-Boe Island, Dare Co., N.C., 1 January	Morehead City, N.C., 1 January	Wilmington, N.C., 30 December	Charleston, S.C., 31 December	Hilton Head Is., S.C., 30 December	Mattamuskeet National Wildlife Refuge, N.C., 1 January	Beaufort Co., N.C., 1 January	Pamlico Co., N.C., 31 December	New Bern, N.C., 26 December	Greenville, N.C., 2 January	Rocky Mount, N.C., 8 January	Wayne Co., N.C., 31 December	Fayetteville, N.C., 28 December	Dillon, S.C., 30 December	Columbia, S.C., 28 December	Henderson, N.C., 28 December	Raleigh, N.C., 28 December	Chapel Hill, N.C., 2 January	Greensboro, N.C., 31 December	High Point, N.C., 26 December	Winston-Salem, N.C., 31 December	Stanly Co., N.C., 31 December	Charlotte, N.C., 31 December	Greenville, S.C., 31 December		Anderson, S.C., 27 December	Elkin, N.C., 26 December	North Wilkesboro, N.C., 26 December	Caldwell Co., N.C., 3 December	Gt. Smky Mtn Nat Pk 1 January	
Orange-crowned Warbler	7	1	2	2	2	1	2	1	1	1	1	1	1	1	3	14	59	117	18	4	16	7	1	10	*					6	
Parula Warbler	5055	439	350	1438	257	964	545	205	51	467	55	14	4	6	5	3															
Myrtle Warbler	198	1	1	3	2	6	1	7	3	3	1	3	1	1		12	54	6	*	2	2			5							
Yellow-throated Warbler																															
Pine Warbler																															
Palm Warbler	36	1	2	10	20	20																			2						
Yellowthroat	63	4	1	15	30	11																									
Yellow-breasted Chat	5	7	4	5	*	1																									
House Sparrow	7507	37	84	236	5	108	232	65	370	125	500	70	96	17	395	140	697	94	1453	626	531	829	198	50	297	120	20	100	12		
Eastern Meadowlark	6631	1409	21	230	260	874	17	178	139	311	32	93	82	184	46	487	25	121	134	411	255	152	320	474	25	119	16	1	90	125	
Red-winged Blackbird	68054	22	4009	2170	2065	5429	5030	7629	9720	2394	1615	32	51	272	755	15800	19	98	111	29	10720	41	35	5						3	
Baltimore Oriole	304		1	7	4	1293		27	28	48	27	100	2				4	25	10	2	26	110	214	30	651						
Rusty Blackbird	2644	6	8	4				1	3	60	76	87	35	4																	
Brewer's Blackbird	9																														
Boat-tailed Grackle	2865	129	19	75	15	2727																									
Common Grackle	14739	2	115	72	132	275	506	296	4	604	4287	360	70	15	545	449	12	579	17	6200	18	18	105	54						4	
Brown-headed Cowbird	6546		40	25	6	12	63	20	921	41		35			26		6	24	55	324	238	3186	250	1275							
Western Tanager																															
Cardinal	5232	28	22	149	123	645	101	150	104	134	57	19	61	78	39	104	129	440	365	503	168	661	372	344	25	29	26	11	105	240	
Blue Grosbeak	1					1																									
Evening Grosbeak	2																														
Purple Finch	330	3	39	27	1			5	40	2	17	1	40		22		26	27	35	14	3	4	23		*	1					
Pine Siskin	27																														
American Goldfinch	1429	14	*	254	98	53	12	8	16	1	43	5	15	9	28		2	75	192	125	41	78	24	32	6	34	200	8	56		
Rufous-sided Towhee	1727	40	12	105	250	218	20	81	24	60	11	20	10	55	8	71	39	236	70	37	22	80	56	91	34	26	2	7	15	27	
Inspwich Sparrow	2																														
Savannah Sparrow	1189	235	88	268	315	58	2	4	15	55	7	28	13	4		58	1	3	2	6	5	5	13					1	8		
Grasshopper Sparrow	3			3																											
Henslow's Sparrow	4																														
Sharp-tailed Sparrow	36		13	18	1	4																									
Seaside Sparrow	30	2	17	10	1																										
Vesper Sparrow	403		18	122	214																	2		1	13					3	
Lark Sparrow	1			1																											
Bachman's Sparrow																															
Slate-colored Junco	7566	20	32	169	352	146	16	180	104	524	139	320	114	82	126	162	144	801	535	814	441	818	377	418	150	127	160	15	89	191	

Tree Sparrow	755	30	401	139	1	5	5	65	15	2	40	4	*	15	26	2	*	5	*	15	108	2	6	11	85					
Chipping Sparrow	1536	107	80	98	3	11	*	101	10	4	11	3	9	236	1	89	39	80	27	70	182	146	15	108	2	6	11			
Field Sparrow	61	2	18	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1				
White-crowned Sparrow	6238	22	29	669	911	683	8	114	37	234	96	33	112	128	76	159	183	623	572	263	130	218	287	246	28	85	40	31	58	163
White-throated Sparrow																														
Fox Sparrow	591	17	38	118	101	3	3	14	1	11	2	15	6	15	1	30	97	55	6	1	23	1	26	1	1	4	2			
Lincoln's Sparrow	1	1																												
Swamp Sparrow	1049	83	2	238	402	53	1	14	24		34	4				54	10	55	8	1	10	24	1	17	15					
Song Sparrow	2443	72	23	125	493	87	11	47	13	116	46	1	19	31	9	81	4	253	153	222	51	214	42	148	25	31	12	16	98	
Snow Bunting	5	1														4														
TOTAL SPECIES	212	113	100	157	137	136	81	69	61	95	55	76	65	60	57	58	50	86	77	85	63	75	71	62	48	74	45	33	40	57
TOTAL INDIVIDUALS	341724	19512	10025	15790	33171	21574	69438	12508	12293	13469	8704	2744	1959	2826	2154	20012	3126	7705	5455	14362	6475	33837	6404	4683	1098	5749	1938	1039	960	2714

*Seen in count area during count period but not on count day.

**Black-capped Chickadees listed with Carolina Chickadees.

CHRISTMAS BIRD COUNT—1966

ELOISE F. POTTER

Participants in the 1966 Christmas Bird Count in the Carolinas identified 212 species, only three less than the all-time high of 215 species recorded in 1965. All five coastal count areas tallied 100 or more species, Wilmington leading the way with 157. The total number of individuals was 341,724. At 29 localities (two more than last year) 402 observers in 154 parties covered their areas in a total of 1,098 party-hours and traveled 4,927 party-miles. All but two of the counts were made during the period from 26 December through 2 January. Although some observers were hampered by light snow, sleet, rain, and fog, the majority experienced at least comfortable midday temperatures; however, throughout the Carolinas temperatures were generally lower during the count period this year than in 1965.

The severe snow storm of 25-26 January 1966 caused many bird watchers to express concern for the **Eastern Bluebird**. This concern appears to have been justified. A comparison of the bluebird counts in the 26 areas reporting in both 1965 and 1966 indicates a decrease of about 35% in the wintering population. Comparing 1966 data with those of 12 areas also reporting in 1960 indicates the present winter population to be only slightly above the low point of that year (*Chat*, 29:64-65). On 9 February 1967 another major storm dumped 9 inches of snow in the Raleigh-Durham area and similar amounts over large portions of North Carolina. Certainly there is no reason for optimism regarding the effect of this snowfall upon wintering Eastern Bluebirds.

The winter of 1966-1967 is definitely an "off season" for northern finches in the Carolinas. Raleigh and Greensboro each reported one **Evening Grosbeak** on their count days, and there have been a few other scattered reports of single birds. Only Raleigh and Chapel Hill recorded **Pine Siskins** on their count days. **Purple Finches** were found in two-thirds of the count areas, but the total of 330 is considerably below the 1,889 of 1965.

Noteworthy observations during the 1966 Christmas Bird Count include Red-necked Grebes at Wilmington, N.C., and Anderson, S.C.; Harlequin Duck and Common Eider, Morehead City, N.C.; Long-billed Curlew, Charleston, S.C.; Saw-whet Owl, New Bern, N.C.; Eastern Wood Pewee and Western Tanager, Rocky Mount, N.C.; Blue Grosbeak, Stanly County, N.C.; Henslow's Sparrows, Wilmington and Fayetteville, N.C.; Lark Sparrow, Charleston; Lincoln's Sparrow, Bodie-Pea Island, N.C.; and Snow Buntings, Bodie-Pea Island and Henderson, N.C. Details of these and other unusual sight records will be found in the local count summary paragraphs.

Anderson County, S.C. (all points within a 15-mile diameter circle centered at Anderson Airport, as in previous years).—27 Dec.; 6:00 AM to 7:30 PM. Clear to partly cloudy; temp. 26 F to 54 F; wind SW, 0-5 mph. Four observers in 2 parties. Total party-hours, 14 (11 by car, 3 on foot); total party-miles, 210 (207 by car, 3 on foot). **Total species, 74; total individuals, 5,749.** **Red-necked Grebes** (AT, RCT) were seen in two locations on Lake Hartwell, with four birds in one group and three in another. They were observed at length at a distance of 50 yards through a 50x scope. **Rough-legged Hawks** (AT, RCT) were seen near Lake Hartwell at low altitude for several minutes. **Red-breasted Mergansers**, all hens, were seen under good light conditions through a 50x scope while in

the company of Black Ducks. Observer (RCT) is familiar with species.—Adair Tedards (compiler), Douglas Tedards, R. Connor Tedards, Caroline Watson.

Beaufort County, N.C. (all points within a 15-mile diameter circle centered where Upper Goose Creek enters Pamlico River in central Beaufort County, including both sides of the river from Bath to Washington).—1 Jan.; 7 AM to 5 PM. Heavy fog and rain all day; temp. 39 F to 50 F; wind SE, 0-13 mph, mostly calm. Eleven observers in 4 parties. Total party-hours, 29 (20 by car, 9 on foot); total party-miles, 102 (94 by car, 8 on foot). **Total species, 69; total individuals, 12,508.**—Ethel Barkley, Ruth Brown, Geraldine Cox (compiler), Sandra Edwards, Ronnie Hill, James McLaurin, Mary McLaurin, Florence Rollins, Louise Satterthwaite, Marvin Turnage, Edward Watson Jr.

Bodie-Pea Island, N.C. (all points within a 15-mile diameter circle centered 2.7 miles SSE of Bodie Island Lighthouse, to include the southern tip of Bodie Island, northern half of Pea Island National Wildlife Refuge, Wanchese section of Roanoke Island).—1 Jan.; 6:50 AM to 5 PM. Heavy fog until 12:30 PM, then frequent rain showers for the duration; temp. 41 F to 52 F; wind SW-W, 0-35 mph; ground bare, water open. Eight observers in 3 parties. Total party-hours, 29.2 (4 by car, 25.2 on foot); total party-miles, 99 (87 by car, 12 on foot). **Total species, 113; total individuals, 19,512.** Glossy Ibis (RJH, HLJ, PHW) were on Pea Island. White-crowned Sparrows, 17 subadult birds and 1 adult, were observed by all three parties at several locations on both Bodie and Pea Islands. The Lincoln's Sparrow (PWS) was observed at 15 feet in a pile of logs overgrown with grasses in an area of Roanoke Island cleared of trees and brush within the last year or so. The observer is familiar with the species, and the field marks were clearly seen. Song and Swamp Sparrows were also seen at the site.—M.M. Browne, R.J. Hader, H.L. Jones, D.M. Lewis, Eloise Potter, Jack Potter, P.W. Sykes Jr. (compiler), P.H. Warren.

Chapel Hill, N.C. (all points within a 15-mile diameter circle centered at intersection of Columbia and Franklin Streets).—2 Jan.; 7 AM to 5 PM. Clear in morning, partly cloudy in afternoon; temp. 34 F to 52 F; wind calm. Twenty-nine observers in 13 parties, plus 4 individuals working own yards. Total party-hours, 61 (19 by car, 42 on foot); total party-miles, 160 (112 by car, 48 on foot). **Total species, 77; total individuals, 5,455.** The Broad-winged Hawk (MT, DB) is our second winter record in three years (see *Chat*, 29:17, 1965). This is the best species list in the history of our Christmas count, surpassing the total of 76 set in 1957.—Robin Andrews, David Barnes, C. Dale Beers, Charles and Helen Blake, Wanda Calhoon, Louise Crumpacker, William Dye, John Filley, Ashby Fristoe, Claude George, Alexander Hull, Logan and Elinor Irvin, Stella Lyons, Gerald MacCarthy, Thomas Odum, Hans Oelke, Wallace Patterson, Johnnie Payne, Jo Peeler, James Pullman, Wiley Sanders, Robert and Mildred Sharpe, Jean Stewart, Robert and Elizabeth Tuelings (compilers), Matt Thompson, Eleanor Wagstaff, Adelaide Walters, Josephine Weedon, James Whicker.

Charleston, S.C. (all points within a 15-mile diameter circle centered 14 miles NE of Mt. Pleasant and ½ mile E of highway 17).—31 Dec.; 4 AM to 5 PM. Continuous rain; temp. 42 F to 52 F; wind N, 0-15 mph. Twenty-eight observers in 8 parties. Total party-hours, 52 (20 by car, 8 by boat, 24 on foot); total party-miles, 226 (143 by car, 55 by boat, 28 on foot). **Total species, 137; total individuals, 33,171.** The large numbers of American Oystercatchers, Dowitchers, Chipping Sparrows, White-throated Sparrows, Swamp Sparrows, and Song Sparrows are unusual in our area. Two Brant (Cutts) were walking and swimming along the water's edge at Bull's Island. Long-billed Curlew (Cutts) was feeding with Dowitchers on a mud flat between Bull's Island and the mainland. Great

Black-backed Gull (Cutts et al.) was at Price Inlet. **Swainson's Thrush** (JD, ECC) and **Gray-cheeked Thrush** (NC) have been seen several times on the last half-dozen Christmas Counts. Immature **Lark Sparrow** (Blitch) was observed for several minutes at about 25 feet while perched in a small tree at the edge of a field near Cainhoj.—Roy Baker, Francis Barrington, T.A. Beckett III, Edwin L. Blitch, Mrs. Jack Button, David Chamberlain, Norman Chamberlain (compiler), E.C. Clyde, Wilhelmnia Coleman, Teague Coleman, Ed Cuthbert, Ernest Cutts, John Dick, Harry Freeman, Timothy Gwynette, Peter Manigault, John Metcalf, Ted Metcalf, Tom Metcalf, Mrs. Louis Miles, Nell Prior, Anne Richardson, Elizabeth Simons, Capt. and Mrs. L.S. Smith, Arthur Wilcox, Dr. and Mrs. David Yount.

Charlotte, N.C. (all points within a 15-mile diameter circle centered at intersection of 7th Street and Briar Creek as in past 24 years).—31 Dec.; 7:30 AM to 5:00 PM. Cloudy all day, rain in morning; temp. 34 F to 38 F; wind SE, 0-7 mph. Twenty-one observers in 9 parties, 3 individuals working own yards. Total party-hours, 61.5 (28.5 by car, 33 on foot); total party-miles, 369.5 (342 by car, 27.5 on foot). **Total species, 62; total individuals, 4,683.** The 21 **Canada Geese** were a good find for this area. Inclement weather kept the vultures down and thus off the count.—William L. Anderson Jr., John Anderson, Mrs. M.J. Barber, Jimmy Bookout, Miss Lona Byers, Mrs. Edwin O. Clarkson, Dr. W.G. Cobey, Mrs. Harold Dillehay, Mr. and Mrs. A.H. Dykema, J.P. Hamilton, Mrs. A.C. Hendren, Julian Meadows, Mrs. T.L. Millwee, Charles L. Moore, Joseph R. Norwood (compiler), Mrs. Joseph R. Norwood, Mr. and Mrs. Shuford K. Peeler, Douglas Pratt, Mrs. George C. Potter, William Smith, Dr. Henry Stockwell, Vaud Travis (Mecklenburg Audubon Club, guests).

Columbia, S.C. (all points within a 15-mile diameter circle centered intersection of Gill's Creek and Bluff Road).—28 Dec.; 7:00 AM to 5:15 PM. Cloudy, raining; temp. 36 F to 49 F; wind ENE, 4-5 mph. Eleven observers in 4 parties. Total party-hours, 27 (21 by car, 6 on foot); total party-miles, 96 (84 by car, 12 on foot). **Total species, 58; total individuals, 20,012.** The **White-crowned Sparrows** have been seen before, but would be considered rare.—Mrs. William Beck, Gilbert J. Bristow (compiler), Nancy Davis, James Egerton, Mrs. Sanders Guignard, Mrs. B.W. Kendall, Johnny Kinsey, Judson Kinsey, Mr. Clare McCall, Robert Overing, Mrs. Clyde Sisson.

Dillon, S.C. (all points within a 15-mile diameter circle centered at Dillon County Courthouse).—30 Dec.; 7:00 AM to 5:30 PM. Sunny; temp. 32 F to 45 F; wind NE, 6-14 mph. Three observers in 1 party, 1 individual working own yard. Total party-hours, 9.5 (3.5 by car, 6 on foot); total party-miles, 68 (65 by car, 3 on foot). **Total species, 57; total individuals, 2,154.** There were no "white-eyed" towhees this year.—Arch McCallum, Lois McCallum, Marion McCallum, Ricky McCallum.

Elkin, N.C. (all points within a 15-mile diameter circle centered at Elkin to include portions of Surry, Wilkes, and Yadkin Counties).—26 Dec.; 7:30 AM to 4:00 PM. Partly cloudy, cold; temp. 20 F to 40 F; wind NW, 5 mph. Four observers in 3 parties. Total party-hours, 13 (5 by car, 8 on foot); total party-miles, 51 (40 by car, 11 on foot). **Total species, 45; total individuals, 1,938.** **American Goldfinches** were in one big flock.—Tom Bryan, E.M. Hodel (compiler), Jerry Tysinger, Jim Uldrick.

Fayetteville, Cumberland County, N.C. (all points within a 15-mile diameter circle centered two miles south of the Market House on Hwy 301).—28 Dec.; 7 AM to 6 PM. Overcast with light, scattered showers; temp. 32 F to 47 F; wind

NE at 0-7 mph. Three observers in 1 party, 7 individuals working own yards. Total party-hours, 11 (9 by car, 2 on foot); total party-miles, 63 (60 by car, 3 on foot). **Total species, 60; total individuals, 2,826.** Henslow's Sparrow was in hedgerows of field of stubble, feeding with flock of Savannah Sparrows. One individual remained still for long period while Currie, Carter and Hauser carefully checked it out at a distance of 25 feet.—Derb Carter Jr. (compiler), Mrs. M. Chestnut, Mrs. Jonathan Courtney, Mrs. Neill Currie Jr., Doris C. Hauser, Miss Catsie Huske, Mrs. S.C. Rankin, Mrs. J.A. Shaw, Mrs. L.E. Whitfield, Bryon Williams.

Great Smoky Mountains National Park, Tenn.-N.C. (all points within a 15-mile diameter circle centered on Bull Head of Mt. LeConte).—1 Jan.; 2:30 AM to 6:00 PM. Cloudy with some rain; temp. 34 F to 47 F; wind variable, 1-40 mph. Thirty-three observers in 14 parties. Total party-hours, 103 (29 by car, 74 on foot); total party-miles, 328 (245 by car, 83 on foot). **Total species, 58; total individuals, 2,747.**—John Austin, David Burney, Danny Ellis, John Elson, Lloyd Foster, Mr. and Mrs. William Gallagher, Mrs. Harold Garlinghouse, Mr. and Mrs. David Highbaugh, Susan Hoyle, Beth Lacy, Henry Lix (compiler), Susan Lix, Vernon Lix, Mrs. George McGown, Mary McIlwain, J. Mengel, Julia Moore, Louise Nunnally, Holly Overton, Paul Pardue, Ed Smith, Mr. and Mrs. Louis Smith, Mr. and Mrs. Arthur Stupka, James Tanner, Mr. and Mrs. W.B. Williams, Mr. and Mrs. George Wood (Tennessee Ornithological Society, Great Smoky Mountains National Park, and guests).

Greensboro, N.C. (all points within a 15-mile diameter circle centered at WBIG transmitter).—31 Dec.; 5:30 AM to 5:30 PM. Heavy overcast, lakes partly frozen over; temp. 32 F to 43 F; wind variable, S-W, maximum 12 mph. Thirty-five observers in 12 parties. Total party-hours, 95 (48 by car, 47 on foot); total party-miles, 466.5 (429 by car, 37.5 on foot). **Total species, 85; total individuals, 14,362.**—Don Allen, Rose Avery, John Carr, Mrs. David Cason, Ellene Cobb, Larry Crawford, Mr. and Mrs. G.W. Daniels, Charlotte Dawley, Jean Gertz, Howard Groover, Sidney Holmes, Mrs. C. Knight, Robert Lasley, Lena Marshburn, James Mattocks, Jean McCoy, Ethel McNairy, Mrs. Hugh Medford, Ida Mitchell, Mrs. G.F. Norcross, Elizabeth Ogburn, Mrs. David Parsons, Penny Parsons, Mrs. G.W. Perrett, Etta Schiffman, Virginia Seawell, A.D. Shaftesbury, G.A. Smith (compiler), Mrs. W.F. Smyre, Tom Street, Mrs. C.R. Surratt, June Tipton, Margaret Y. Wall, Mrs. R.H. Weisner.

Greenville, Pitt Co., N.C. (all points within a 15-mile diameter circle centered at intersection of Elm and Tenth Streets in Greenville).—2 Jan.; 4:00 AM to 5:30 PM. Cloudy with some patches of heavy fog in early morning, clearing in afternoon; temp. 39 F to 51 F; wind W, 0-5 mph. Two observers in 1 party, 3 individuals working own yards. Total party-hours, 8 (7 by car, 1 on foot); total party-miles, 110 (106 by car, 4 on foot). **Total species, 55; total individuals, 8,704.** Female Gadwall (RLW) was observed at close range, both feeding and flying. Gull and blackbird estimates are conservative. This was the first count for the Greenville area in over 10 years.—Edmund Welch (compiler), R.L. Wolff.

Greenville, S.C. (all points within a 15-mile diameter circle centered at intersection of Hwy 29 and 291).—31 Dec.; 8:00 AM to 5:30 PM. Partly cloudy; temp. 28 F to 44 F; wind 5 mph. Seven observers in 3 parties, 1 individual working own yard. Total party-hours, 9.5 (7 by car, 2.5 on foot); total party-miles, 65 (60 by car, 5 on foot). **Total species, 48; total individuals, 1,098.**—Ruth Gilreath, Gladys Hart, Lillie Hart, Rosa Lee Hart (compiler), Mamie Kanaley, Martha Lawrence, May Puett.

Henderson, Vance Co., N.C. (all points within a 15-mile diameter circle centered Henderson).—28 Dec.; 8:00 AM to 4:45 PM. Light snow in morning changing first to light rain then to heavy rain in afternoon; temp. 32 F to 36 F; wind variable, E to SE, average velocity 7.9 mph. Seven observers in 1 party, 7 individuals working own yards. Total party-hours, 8.75 (2.5 by car, 6.25 on foot); total party-miles, 56 (46 by car, 10 on foot). **Total species, 50; total individuals, 3,126.** The cloudy weather, with almost continuous precipitation, prevented finding of hawks and vultures. The **Snow Buntings** (PAS) were flushed from a mud flat at Kerr Lake when about 40 feet from observer, displaying their distinctive white wing patches.—Miss Neita Allen, Mrs. A.W. Bachman, Mrs. W.B. Daniel Jr., Mrs. Eric Flannagan Sr., Mrs. S.R. Harris, Mr. and Mrs. Herbert Huggins, Miss May Hunter, Miss Garnette Myers, David E. Stewart, S. Michael Stewart, Mrs. Paul A. Stewart, Paul A. Stewart (compiler).

High Point, N.C. (all points within a 15-mile diameter circle centered at intersection US 311 and Lexington Avenue to include High Point, Jamestown, High Point reservoir, Sedgfield, Archdale, Trinity, Allen Jay, Oak View, Emerywood Forest).—26 Dec.; 3:30 AM to 5:30 PM. Fair to partly cloudy, 30% coverage with 1 inch snow, small ponds frozen; temp. 17 F to 45 F; wind NW, 0-15 mph. Fifteen observers in 9 parties. Total party-hours, 36.5 (26.5 by car, 10 on foot); total party-miles, 220.5 (209 by car, 11.5 on foot). **Total species, 63; total individuals, 6,475.**—John T. Austin, John W. Austin Jr., David Burney, Anne Byerly, Sandra Edwards (compiler), Anne Ellis, Pearl Hatcher, Gladys Horney, Josephine Lyon, Charles Mackintosh, Edith Mattocks, James Mattocks, Mary Alice Siceloff, Clarence Velat, Ruth Velat.

Hilton Head Island, Beaufort Co., S.C. (all points within a 15-mile diameter circle centered Hilton Head Island Post Office, including Hilton Head Island, Pinckney Island, Colleton Neck, parts of Bluffton).—30 Dec.; 6 AM to 6 PM. Cold morning, fair to partly cloudy; temp. 36 F to 56 F; wind variable 5-10 mph. Thirty-nine observers in 9 parties, 4 individuals working own yards. Total party-hours, 70.5 (21 by car, .5 by boat, 49 on foot); total party-miles, 215 (165 by car, 1 by boat, 49 on foot). **Total species, 136; total individuals, 21,453.** Oldsquaws (RW) were studied with scope in good light. White-winged Scoters (RW, LP, VH) were seen with glasses and scope on water and in flight; white wing patches clearly visible. Least Terns (BH, AH, VL) were observed closely in both morning and afternoon. Eastern Kingbirds (CG) were perched on a wire in good light. White-eyed Vireos (AH, VD) were seen well and heard singing. Parula Warbler (NB) was seen with glasses at close range.—Mr. and Mrs. John Adams, Mr. and Mrs. W.H. Branch, Nancy Butler, Violet Duane, Anne Dow, Chester Goddard, Avary Hack, Billie Hack, Frederic Hack, Mrs. Whitney Hammet, Mr. and Mrs. David Harrall, Florence Harry, Alva Hines, Charlotte Inglesby, Arlene Jones, Mr. and Mrs. Jack Jordan, Eunice Juckett, Mr. and Mrs. Henry Lawrence, Virginia Linton, Anne Loda, Imogene Lowden, Mr. and Mrs. E.O. Mellinger, Caroline Newhall (compiler), Dr. and Mrs. William Pitcairn, Will Post, Anne Reddy, Mr. and Mrs. C. S. Sergeant, Mr. and Mrs. Robert Whitney, Gladys Wilde, Alice Woodring.

Lenoir, Caldwell Co., N.C. (all points within a 15-mile diameter circle centered at Lenoir).—3 Dec.; 7:15 AM to 5 PM. Light overcast; temp. 16 F to 38 F; wind slight, probably under 5 mph, from SW. Eight observers in 3 parties. Total party-hours, 27 (18 by car, 9 on foot); total party-miles, 65 (40 by car, 25 on foot). **Total species, 40; total individuals, 960.** Turkey Vultures have become extremely rare in this locality, and White-breasted Nuthatches are scarce.—Mrs. J.B. Bernard, Margaret Harper (compiler), E.M. Manchester, Mrs. E.M. Manchester, Fred May, Mrs. Fred May, Helen Myers, Mrs. James H. Seegars.

Mattamuskeet National Wildlife Refuge, Hyde County, N.C. (all points within a 15-mile diameter circle centered Mattamuskeet Lodge and including most of Mattamuskeet Refuge and portions of Swanquarter Refuge).—1 Jan.; 7:00 AM to 5:00 PM. Overcast with rain and fog; temp. 39 F to 44 F; wind N, 2-5 mph. Four observers in 2 parties. Total party-hours, 10 (8 by car, 2 on foot); total party-miles, 96 (92 by car, 4 on foot). **Total species, 81; total individuals, 69,438.**—Gayle Austin, Willie G. Cahoon (compiler), Hal G. Swindell, Frances Waters.

Morehead City, N.C. (all points within a 15-mile diameter circle centered at Crab Point Intersection).—1 Jan.; 4:00 AM to 5:30 PM. Mild, heavy fog, steady rain after 10 AM; temp. 41 F to 58 F; wind variable, 0-10 mph. Five observers in 4 parties. Total party-hours, 36 (30 by car, 6 on foot); total party-miles, 148 (142 by car, 6 on foot). **Total species, 100; total individuals, 10,025.** **Harlequin Duck** and **Common Eider** were first seen at Fort Macon 25 December by David Barnes and Tommy Wade. Both species were still present 8 January. **Least Terns** (WH) were seen at Beaufort. **Short-eared Owl** (JF III) was seen at very close range near Fort Macon.—John O. Fussell II, John Fussell III (compiler), Will Hon, Ruth Peeling, Mrs. Joe Windley.

New Bern, Craven Co., N.C. (all points within a 15-mile diameter circle centered at airport to include Neuse River from mouth of Broad Creek to Street's Ferry and Trent River to Hardison farm).—26 Dec.; 7:00 AM to 5:00 PM. Clear; temp. 24 F to 48 F; wind SW, 2-16 mph. Ten observers in 4 parties, 1 individual working own yard. Total party-hours, 29 (10 by car, 19 on foot); total party-miles, 164 (148 by car, 16 on foot). **Total species, 95; total individuals, 13,469.** **The Saw-whet Owl** (TS) is a new species for this locality; identified by call. **Osprey** was unusually late.—Joel Clark, Margaret Conderman, Allan Connelly, Robert Holmes (compiler), J.A. Meadows, Sue Meadows, Allen Olmstead, Tom Sherratt, Sam Sweeny, Mrs. C.S. Warren.

North Wilkesboro, N. C. (all points within a 15-mile diameter circle centered at North Wilkesboro to include portions of Reddies and Yadkin River Valleys and parts of Kerr Scott Reservoir).—26 Dec.; 6:30 AM to 5:00 PM. Clear most of day, but overcast at midday; wind W, increasing to 15-20 mph in late afternoon. One observer. Total party-hours, 9; total party-miles, 23 (16 by car, 7 on foot). **Total species, 33; total individuals, 1,039.**—Wendell Smith.

Pamlico County, N.C. (all points within a 15-mile diameter circle centered in Florence at the intersection of roads 1324 and 1329).—31 Dec.; 7 AM to 5 PM. Low clouds, raining all day; temp. 38 F to 43 F; wind SW, 0-4 mph, mostly calm. Four observers in 2 parties. Total party-hours, 17 (14 by car, 3 on foot); total party-miles, 94 (90 by car, 4 on foot). **Total species, 61; total individuals, 12,293.**—Jeff Cowell, Geraldine Cox (compiler), Sandra Edwards, Marvin Turnage.

Raleigh, N.C. (all points within a 15-mile diameter circle centered at State Capitol Building).—28 Dec.; 6:30 AM to 5:30 PM. Cloudy all day, sleet in early morning, some rain in afternoon, ice at edges of lakes and streams; temp. 28 F to 36 F; wind practically calm all day. Thirty-seven observers in 12 parties. Total party-hours, 77.5 (22.5 by car, 55 on foot); total party-miles, 231 (194 by car, 37 on foot). **Total species, 86; total individuals, 7,705.**—Fred M. Barberie, Mrs. F.H. Brant, Mike Browne, Mrs. Chas. I. Bryan, Chas. I. Bryan, W.J. Buffaloe, Mrs. Davis Cates, Ella Chalfant, Mrs. W.R. Clary, Mrs. John Coffey Jr., Ann Davis, Mrs. Lloyd H. Davis, Mrs. L.E. Dillard, Charlotte Green, Mrs. Z.B. Green Jr., R.J. Hader, Bill Hamnett, Arnold Hoffmann, Samuel Hoshour, Ester Ivey, Mrs. Robert Jackson, Mabel Jones, John Lamson, Mrs. John Lamson,

Edmund LeGrand, Harry LeGrande, Dale Lewis, Mrs. Stephen Maddock, Edna Miller, Darryl Moffett, Dr. and Mrs. John Rhodes, Mrs. C.E. Richardson, Mrs. R.A. Turbiville, Mrs. W.L. Wilson, Mrs. D.L. Wray, D.L. Wray (compiler).

Rocky Mount, N.C. (all points within a 15-mile diameter circle centered at Battleboro to include Rocky Mount, Swift Creek, Fishing Creek, Braswell's, Horne, Ward, Johnston Anderson Ponds, Tar River, and Battle Park).—8 Jan.; 6:00 AM to 5:00 PM. Rainy and overcast; temp. 60 F to 64 F; wind calm. Eight observers in 2 parties, 2 individuals working own yards. Total party-hours, 21 (18 by car, 3 on foot); total party-miles, 146 (140 by car, 6 on foot). **Total species, 76; total individuals, 2,744.** Female **Western Tanager** (JB, JLT) was at Joyce Bennett's feeder for a week prior to the count.—Joyce Bennett, Marvin Howell, Steve Howell, Robert Perry, Sarah Speight, Carr Speight, John L. Thompson (compiler), Mary Louise Warner. [Mrs. Bennett reports the Western Tanager was first seen 2 January and was not seen after 22 January.—Ed.]

Stanly County, N.C. (all points within a 15-mile diameter circle centered 2 miles NW of Badin to include Tuckertown and Badin Lakes, Albemarle City Lake, Morrow Mountain State Park).—31 Dec.; 6:00 AM to 5:30 PM. Very cold, cloudy with occasional light rain; temp. 33 F to 42 F; wind SE, 6-8 mph. Eighteen observers in 8 parties, 14 individuals working own yards. Total party-hours, 72.5 (22.5 by car, 50 on foot); total party-miles, 243.5 (217 by car, 26.5 on foot). **Total species, 71; total individuals, 6,404.** Most unusual find was the **Blue Grosbeak** (GH, SH), which was studied at close range. **White-crowned Sparrow** (VW, NH) was on Millingport Road. West Albemarle continues to be the feeding ground for **Baltimore Orioles**, 34 having been counted a week prior to count day when only 26 were seen. A **Catbird** used the Crooks' birdbath daily for weeks, but failed to appear on the count day.—Roy Blalock, Erin Blalock, Barrett Crook, Vera Crook (compiler), George Culp, Myrtle Culp, Nina Eudy, Joe Ferebee, Louise Hammill, Mattie Gereg, C.M. Haithcock, Lectie Harwood, Nelle Hinson, Sherman Hill, Gladys Hill, Louis Hartung, Gertrude Hartung, Myrtle Isenhour, Ruth Kearns, Vera Littleton, Cindy Lowder, Donald Maner, Doris Mauney, Paine Misenheimer, Bessie Morgan, Harold Morris, William Mount, Nana Swecker, Addie Thompson, Vivian Whitlock, Bennie Winget.

Wayne County, N.C. (all points within a 15-mile diameter circle centered at Indian Springs to include Seven Springs, Mt. Olive, Walnut Creek Lake and Cliffs of the Neuse State Park).—31 Dec.; 7:00 AM to 5:00 PM. Rain; temp. 38 F to 46 F; wind calm to NE 10 mph. Two observers in 1 party, 1 individual working own yard. Total party-hours, 10 (8 by car, 2 on foot); total party-miles, 85 (83 by car, 2 on foot.) **Total species, 65; total individuals, 1,959.** The two Shovelers were on Walnut Creek Lake and have been there for several weeks. The Eastern Bluebird count was the lowest since 1961 (the first year I made a count here). This year's total only one-third of last year's total.—G.P. Nowlin, R.H. Siler (compiler), Margaret Walker.

Wilmington, N.C. (all points within a 15-mile diameter circle centered at Myrtle Grove Junction).—30 Dec.; 5:30 AM to 5:30 PM. Clear in morning, overcast in afternoon; temp. 29 F to 50 F; wind N-NW, 4-9 mph. Twenty-one observers in 8 parties. Total party-hours, 74.5 (30.5 by car, 2 by boat, 42 on foot); total party-miles, 319 (254 by car, 10 by boat, 55 on foot). **Total species, 157; total individuals, 15,790.** **Red-necked Grebe** (JFP, JP) was seen off Carolina Beach through a 30x scope. **Pectoral Sandpipers** (JH, GM) were in low wet grass area in large pond at Orton Plantation; both were observed through a 50x scope under excellent light conditions, and one was seen in flight. **Sandwich Tern** (JP) was at Carolina Beach; bill seen clearly through 30x scope.

Short-eared Owl (GM) was seen well flying over marsh at Orton Plantation. **Dovekie** (JFP) was seen at close range at Carolina Beach. **Barn Swallow** (FN, EP, JS) at Wrightsville Beach was seen in flight and perched on wire. **Swainson's Thrush** (PM) at Greenville Sound was seen on ground at close range; all field marks noted. **Yellow-throated Warbler** (MH, DL) was at Wrightsville Sound.—Cecil Appleberry, Edna Appleberry, Mike Browne, Derb Carter, Geneva Dyches, Dot Earle (compiler), Tommy Grant, Adron Hall, Jim Hunt, Kitty Kosh, Harry Latimer III, Dale Lewis, Greg Massey, Billy McEachern, Polly Mebane, Frances Needham, James F. Parnell, Eloise Potter, Jack Potter, Julia Shepard, Mary Urich.

Winston-Salem, N.C. (all points within a 15-mile diameter circle centered at intersection of I-40 and Silas Creek Parkway, as in previous years).—31 Dec.; 5:30 AM to 6:00 PM. Cloudy, intermittent rain and sleet, lakes partly frozen; temp. 32 F to 43 F; wind SW, 0-7 mph. Twenty-four observers in 10 parties, 8 individuals working own yards. Total party-hours, 76 (14 by car, 62 on foot); total party-miles, 407 (366 by car, 41 on foot). **Total species, 75; total individuals, 33,837.** **Pigeon Hawk** (DS) was seen at close range and in good light, both perched and in flight, with all field marks noted. **Virginia Rail** (HS, RS, BP, LA) was seen at close range at edge of cattail marsh in Reynolds Estate. **Fish Crow** (FH, CRH) was at city dump; identified by call. **American Woodcock** (CRH, FH) was performing its mating display at dawn.—Linda Arnold, Carolyn Cowherd, Yelverton Cowherd, John Davis, Velma Davis, Gardner Gidley, Gary Gidley, Margaret Gidley, Fred Hill, Ruth Hill, C. Royce Hough (compiler), Barbara Page, Mary Parker, Joe Pearson Jr., Temple Pearson, Melissa Petty, Doris Simpson, Harry Snavelly, Ramona Snavelly, Edith Spinks, Edward Thompson, Myron Vourax, Robert Witherington.

General Field Notes

THOMAS L. QUAY, *Department Editor*

Department of Zoology, North Carolina State University, Raleigh, N.C.

A Sight Record of the Western Grebe at Charleston.—On 23 November 1966 a Western Grebe (*Aechmophorus occidentalis*) was observed at Fort Johnson in Charleston harbor. The bird was seen at 1 PM feeding about 100 yards offshore with a Common Loon and several Horned Grebes and was studied for 20 minutes in good light with a 30x Balscope. The long neck and black-and-white color pattern were striking. When diving the bird stayed down longer than either the loon or the other grebes.

Previous records for the Carolinas are based on a specimen taken in Charleston County, South Carolina on 22 June 1936 (*Birds of South Carolina*, 1949) and sight records at Pea Island, North Carolina on 30 March 1959 and at Wake County, North Carolina on 28 December 1961 (*Chat*, 26:17, 1962).—NORMAN A. CHAMBERLAIN, *Grice Marine Biological Laboratory, Route 1, Charleston, South Carolina*.

Sandhill Cranes in South Carolina.—Today, 30 December 1966, I saw a truly wonderful sight, one that would stir the soul of anyone with an appreciation of wildlife and wild places.

While returning from a most successful morning's duck hunt at Pon-Pon, Mr. Donald D. Dodges' marshes just across the Edisto River from Willtown Bluff, I saw fourteen Sandhill Cranes (*Grus canadensis*). They were standing in a shallow bog erect and close together, not one hundred yards from the dirt road that we traveled. There were eleven adults and three young. With the slamming of the wagon door, the birds took off in flight, their loud bugling calls filling the air. On five-foot wings they slowly flapped away over the marshes and settled maybe one third of a mile back in the wet grasses. According to available records (*South Carolina Bird Life*, by Alexander Sprunt and E. Burnham Chamberlain, 1949), only four of these birds have ever been seen in South Carolina before this time.

Sandhill Cranes, close relatives to the much publicized Whooping Cranes (*Grus americana*), are about four-feet tall, stately birds that demand attention and admiration whenever seen. In color they are all gray with whitish cheeks and a bald, crimson forehead. Generally speaking their (*G.c. tabida*) breeding range is the northwestern sections of the United States and Canada, including Alaska (some are also found in eastern Siberia), where in the wilder sections of marsh and prairie they are moderately common.

Florida has a similar, local race (*G.c. pratensis*) that is non-migratory, living and nesting in the pine-palmetto scrub country of the central and southern parts of the state. The western bird is highly migratory, wintering from California east to coastal Texas and south into Mexico.

Whether the birds seen the other day were of the western or Florida race remains to be known. The only bird ever collected in South Carolina was at Rice Hope Plantation, Georgetown County, 19 December 1941. Dr. Harry C. Oberholser examined the bird and classified it as the western race.

The Pon-Pon cranes seem to have been building up their numbers from four, ten years ago, to eight, three years ago, to the present population of fourteen. What brings and holds them here is hard to tell. One of their favorite foods in Florida is the fleshy roots and rhizomes of Redroot (*Lachmanthes tinctoria*

(Walt.) Ell.), is common in the peat-bottomed marshes of Pon-Pon, where it is an important duck food. This must be a definite holding influence to the small local crane population.

What their future will be in South Carolina is impossible to foretell. Let us hope that their numbers will continue to increase. There are few birds on this continent that are more handsome and majestic than the Sandhill Crane.—JOHN H. DICK, *Dixie Plantation, Meggett, South Carolina*.

Fall Shorebird Records at Raleigh, N.C.—Beginning in early July 1966 and continuing through the fall extensive mud flats existed around several of Raleigh's reservoirs. A good opportunity was thus provided to study shorebird migration well inland from the coast. Three sites (Lake Raleigh, Lake Johnson, and Lake Wheeler) were visited at least once a week from 2 July through 5 November. More frequent visits were made from mid-August through September. A total of *seventeen* different shorebird species were found. At least one of these (Buff-breasted Sandpiper) is considered rare anywhere in North Carolina and several more are quite unusual away from the coast. An annotated list follows:

SEMPALMATED PLOVER: One or two on six occasions from 8/13 to 10/2.

KILLDEER: Permanent resident. Generally 10 to 30 on flats.

GOLDEN PLOVER: Two seen together on 11/5. At least one of these was still present the following day. This species is uncommon even on the coast.

BLACK-BELLIED PLOVER: A single individual in somewhat mottled plumage was present from 9/5 through 9/9. Only a few inland records for North Carolina have been published.

WOODCOCK: Permanent resident, but a group of four seen on 7/9 may have been migrants.

COMMON SNIFE: Winter resident. First seen 8/26 and more or less regularly thereafter. A flock of about 20 together seen 11/5.

SPOTTED SANDPIPER: Probably around earlier but first 8 seen on 7/23. Smaller numbers thereafter through 9/9; then none until 2 more found on 10/15.

SOLITARY SANDPIPER: First two seen on 7/23. From 1 to 5 through 9/9, then none until 1 more on 10/29.

GREATER YELLOWLEGS: First two on 9/3, then 1 to 3 on five or six occasions through 11/6. This species was present through December 1965 and early January 1966.

LESSER YELLOWLEGS: First on 8/13 and from 1 to 10 through at least 11/5.

PECTORAL SANDPIPER: Five as early as 8/2 and from 2 to 15 through at least 11/5.

LEAST SANDPIPER: Two as early as 8/6. Largest numbers (15-20) around 8/26 and 8/29. Five still present 11/5.

DUNLIN: A single individual seen on 10/15. This is apparently one of the very few inland records.

DOWITCHER: One or two on nine occasions from 8/29 through 10/15. The first was still in summer plumage.

SEMPALMATED SANDPIPER: One to five from 8/13 through 10/29.

WESTERN SANDPIPER: Two together on 11/5 and still present 11/6.

BUFF-BREASTED SANDPIPER: A single individual at Lake Raleigh on 8/29, apparently a first record for this area. Seen first in morning and studied carefully at close range for half an hour. Later in the day I returned with Paul Sykes who confirmed the identification. An attempt to collect the bird was unsuccessful.

In summary, with suitable habitat available a good number of shorebird species may be found at inland locations in the fall. Numbers of individuals are comparatively small. Migration is apparently spread out over approximately three months but is most intense during the last week of August and first week of September. The same pattern was observed in 1964 when a similar habitat

situation existed. Numbers of individuals were somewhat higher in 1964, but only one species—American Avocet—was seen then and not in 1966.—R.J. HADER, *N.C. State University, Raleigh, N.C.*, 1 December 1966.

Dovekies in Surf at Kitty Hawk.—On Sunday, 24 November 1966, while surf casting at Kitty Hawk, N.C., I observed a Dovekie apparently attempting to reach the beach through the very rough surf. After considerable struggle, the Dovekie made the beach and rested quietly for awhile just above the water line. I was able to approach and capture the bird which seemed to be too exhausted to attempt escape. The Dovekie was very plump and apparently unharmed except for exhaustion.

Subsequently, three other Dovekies made a landfall and after resting briefly began vigorous flapping motions as if trying to fly. Upon approach, however, they made their escape by scooting awkwardly back into the surf, only to make a subsequent landfall soon thereafter. This behavior was repeated after each interruption by passersby until I left the beach about an hour later.—ROBERT E. STEVENS, *Department of Zoology, North Carolina State University, Raleigh, N.C.*

Chat Returns for Third Winter Sojourn.—In early November 1964, a Yellow-breasted Chat (*Icteria virens*) began to visit the feeding station maintained by Byron Williams at his home in Fayetteville, N.C. A numbered USFWS band was placed on the chat on 5 January 1965. The bird remained, feeding primarily on peanut butter for three more months, until early April.

The banded chat reappeared on 4 November 1965 and stayed through the winter until 9 April 1966. On 1 December 1966, the banded chat resumed its daily visits, apparently prepared to overwinter in Fayetteville for the third consecutive year.

Although chats have been recorded at other local feeding stations during the winter months, this is the first record we have of a banded individual over a three-year span.—DORIS C. HAUSER, 309 Sylvan Road, Fayetteville, N.C., 16 January 1967.

Two Tree Sparrows Collected in North Carolina.—On 12 February 1966 I collected two Tree Sparrows (*Spizella arborea*) from a flock of three on the northeast shore of Lake Raleigh, Wake County, N.C. (*Chat*, 30:54). They were first seen by Steve Fretwell on 7 February feeding among Field Sparrows (*Spizella pusilla*) in and around a crabgrass field bordering the lake.

Study skins were prepared of the specimens and placed in the North Carolina State University collection. One bird proved to be a female and the other a male. Their stomachs (crop and gizzard contents) were analysed (Table 1).

TABLE 1. Food Contents of Two Tree Sparrow Stomachs.

Seeds Eaten	Female (58HLJ)				Male (59HLJ)			
	Crop		Gizzard		Crop		Gizzard	
	Cc.	% Vol.	Cc.	% Vol.	Cc.	% Vol.	Cc.	% Vol.
Crabgrass (<i>Digitaria</i>)	.10	83	.07	58	Trace	—	.04	100
Pigweed (<i>Amaranthus</i>)	.02	17	.05	42	—	—	—	—
Sedge (<i>Cyperus</i>)	—	—	Trace	—	—	—	—	—
Evening Primrose (<i>Oenothera</i>)	—	—	—	—	Trace	—	—	—
Goosegrass (<i>Eleusine</i>)	—	—	—	—	—	—	Trace	—
Totals	.12	100	.12	100	—	—	.04	100

On 26 January there was a heavy snowfall over a major portion of the state and the temperatures remained 4 to 16 F below normal until 7 February when a warm front passed through. The snow and below-average temperatures may have contributed to the presence of these birds in this area.

Although the records for Tree Sparrows in the state are fairly numerous, their presence was represented by only one specimen prior to the ones mentioned here. The first specimen was secured by Thomas Burleigh at Asheville during the winter of 1932-1933.—H.L. JONES, *Department of Zoology, North Carolina State University, Raleigh, 19 January 1967.*

BRIEFS FOR THE FILES

Compiled by JAMES F. PARNELL

Department of Biology, Wilmington College, Wilmington, N.C.

(All dates 1966 unless noted.)

- Pied-billed Grebe**, 1 was found in breeding plumage at Black Mountain, N.C. on 14 August by Edmund Welch.
- Yellow-crowned Night Heron**, an immature bird seen at Winston-Salem, N.C. on 24 November was both late and far inland, Royce Hough.
- White Ibis**, flocks of 25 to 30 birds, mostly immatures, continue to be recorded regularly throughout the winter in the Smith Island marshes near Southport, N.C., James Parnell.
- Mute Swan**, 3 studied at close range in the "bight" of Cape Lookout, near Harker's Island, N.C., on 16 Nov. by Eugene B. Pond.
- Brant**, a flock of 6 was seen in the Cape Fear River near Ft. Fisher, N.C. on 2 January 1967, James Parnell.
- Snow Geese**, 3 of these birds were seen near Ft. Fisher on 19 December, James Parnell.
- Canvasback**, an unusually large flock estimated at 300 birds was seen on L. Benson, near Raleigh, N.C., on 25 November by Mike Browne.
- Common Goldeneye**, a sizable flock of 28 was found inland on a small lake near Bethania, N.C. on 20 November by Ramona Snaveley.
- Rough-legged Hawk**, 1 seen on 17 November at North Wilkesboro, N.C., by Wendell Smith was a first record for that area.
- Peregrine Falcon**, 1 adult and 1 immature bird seen at Ft. Fisher on 25 September by Lee Jones and Phil Warren.
- American Golden Plover**, a single bird was seen at Piver's Island near Beaufort, N.C., on 30 September, Phil Warren.
- Upland Plover**, 1 collected on 3 September at Harker's Island. The skin is now in the State Museum at Raleigh, Eugene B. Pond.
- Buff-breasted Sandpiper**, 1 found sick on 21 September at Avon, on North Carolina's "outer banks" by David Cristie. The skin is now in the collection of the Biology Department of Wilmington College.
- American Avocets**, an unusually large flock of 150 seen on 3 September at Bodie Island in the Cape Hatteras National Seashore by Paul A. Buckley; 3 seen very late on 19 December at Ft. Fisher, James Parnell.
- Bonaparte's Gulls**, 2 seen inland near Raleigh on 13 November by Edmund and Harry LeGrande.
- Forster's Tern**, 1 found inland at Raleigh on 30 August by Paul W. Sykes.
- Caspian Tern**, 3 seen inland near Raleigh on 5 September by R.J. Hader.

Black Tern, 8 seen on L. Hartwell near Anderson, S.C. on 6 November were quite late, Adair Tedards.

Dovekie, several sightings indicate the probability of many of these northern birds off our coast. 1 was found dead near Avon, N.C., on 19 November by Paul Buckley; 2 were found crippled during the last week of November at Cape Hatteras by Clay Gifford; John O. Fussell III observed several flocks of about a dozen passing the Iron Steamer Pier, Atlantic Beach, N.C., on 27 November, and for several days thereafter many bodies were found on the beach; 1 was collected at Ft. Fisher on 17 December, and 2 were seen in the vicinity of Kure Beach, N.C., on 20 December by James Parnell; Fussell again saw Dovekies at Atlantic Beach on 21 and 22 December.

Chimney Swift, 2 of these birds were very late on 10 November at Winston-Salem, Royce Hough.

Western Kingbird, 3 seen on 8 October at Bodie Island by Paul Sykes and Paul Buckley.

Yellow-bellied Flycatcher, 1 seen on 30 September at North Wilkesboro by Wendell Smith; and 1 found on 25 September at Doughton Park, N.C., by Royce Hough.

Nashville Warbler, 1 found at Anderson on 13 October by Adair Tedards; 2 seen at North Wilkesboro on 12 October by Wendell Smith.

Cerulean Warbler, 1 very late at North Wilkesboro on 14 November, Wendell Smith.

Bay-breasted Warbler, single individuals seen at Raleigh on 8 September and 9 and 12 October by Robert Hader; 1 found at Doughton Park on 25 September by Royce Hough.

Connecticut Warbler, 1 banded on 3 October and another on 8 October on Bodie Island by Paul Sykes.

Wilson's Warbler, 1 banded on 1 October on Bodie Island by Paul Sykes.

Scarlet Tanager, 2 found unusually far east, at Bodie Island, on 8 October by Paul Buckley and Paul Sykes.

Lincoln's Sparrow, 1 seen on 3 October at North Wilkesboro by Wendell Smith.

BACKYARD BIRDING

(Continued from page 9)

February 9. One Mockingbird was eating seeds of the Althaea. Two were on the lantana, but dried lantana berry seeds were almost gone. Four Mockingbirds carried off crackers.

February 10. Two mockingbirds ate of the remains of a ham and noodle casserole. Birds carried away every scrap.

February 16. Mockingbirds ate crackers, cookies, corn crisps, and potato chips. Grackles and Red-wings shared this diet.

February 22. Mockingbirds feeding in chinaberry. Also fed on bread crumbs and crackers.

March 3. Two Mockingbirds ate beefstew with carrots and potatoes. Two more carried away pieces of soft rolls.

March 7. Mockingbirds fed on crackers and potato chips. One Mockingbird ate eight pieces of salad lettuce drenched with Italian dressing.

March 8. A cold spell. All four Mockingbirds, eight Starlings, three Meadowlarks, two Red-winged Blackbirds, three male Boat-tailed Grackles, four Common

Grackles, a Ring-billed Gull, and one fawn colored domestic pigeon all fed on white bread and dry crackers. Mockingbirds kept chasing other birds away and glomming on to the biggest pieces. Birds consumed almost an entire loaf of sandwich bread.

March 12. Mockingbirds fed on grits, along with Meadowlarks, Red-winged Blackbirds, grackles, and Starlings. Two Mockingbirds were observed doing the sideways dance, facing each other, each hopping sideways in unison, like the figure in a stylized square dance.

March 15. Mockingbirds feeding on bread and crackers. Two birds were too aggressive, refused to let a third bird feed. Birds again doing the sideways dance as well as the backwards and forwards figures.

March 22. Three Mockingbirds squabbling, but feeding on pretzels and potato chips.

At this point a domestic crisis interrupted the record keeping, but we had learned enough to decide that the Mockingbirds were indeed omniverous. The thing is, were they gourmets or gluttons?

NEWS AND COMMENTS

Athens Bird Club Reorganized

The Athens Bird Club has been reorganized, having held its first regular meeting 2 November 1966. Three CBC members were elected to head up the club — Joseph R. Fatora, president; Richard H. Peake, vice-president; and Elaine K. Fatora, secretary-treasurer. CBC members in nearby areas of the Carolinas are invited to join or to participate in the annual Christmas and spring counts for the Athens area sponsored by the club. Further information can be obtained by contacting either Mr. Fatora at #61 Farmer's Trailer Court, Commerce Road or Mr. Peake at 342 Milledge Terrace, Athens, Georgia 30601. The club is interested in the possibility of joint field trips with Carolina clubs.

Continental Breeding Bird Survey

During the summer of 1966 the Bureau of Sport Fisheries and Wildlife conducted a Breeding Bird Survey in which over 600 survey routes were run by cooperators throughout the states east of the Mississippi River and the eastern Canadian provinces. The data from the survey will form a basis for determining changes in songbird populations during future years. During 1967 the Survey will be expanded to cover 11 additional states west of the Mississippi River in addition to obtaining more thorough coverage of some of the eastern states, such as throughout the Carolinas.

Each survey route is selected at random and follows a 25-mile course, to be driven by automobile. One trip is made during the month of June. Birders throughout the State, who can identify the breeding birds of the Carolinas by song and sight, and are interested in assisting with the survey, are invited to contact the State Coordinators, Dr. James F. Parnell, Dept. of Biology, Wilmington College, Wilmington, for North Carolina, or T.A. Beckett III, Magnolia Gardens, Charleston, for South Carolina.

Memorial Gift

Catesby Bird Club of High Point, N.C., made a contribution to the Shuford Memorial Sanctuary at Tryon in memory of the late Leon Madison Rivers, a long-time member of both the local club and Carolina Bird Club.



Founded 6 March 1937

Incorporated 8 August 1949

Carolina Bird Club is an incorporated association for the study and conservation of wildlife, particularly birds, chiefly in the Carolinas. Founded in 1937 as the North Carolina Bird Club, it was joined in 1948 by several South Carolina natural history clubs and the name changed to the Carolina Bird Club.

MEMBERSHIP

The Carolina Bird Club, Inc., is a non-profit educational and scientific organization. Dues, contributions and bequests to the club are deductible from State and Federal income and estate taxes. Membership is open to anyone interested in birds, natural history and conservation. The several classes of membership are listed below. Checks should be made payable to Carolina Bird Club, Inc., and sent to CBC Headquarters, Box 1220, Tryon, N.C. 28782.

Regular Membership	\$ 2.00
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THE CHAT

The Chat is published quarterly in March, June, September and December as the official bulletin of Carolina Bird Club, Inc. All members not in arrears for dues receive *The Chat*. Subscription price to non-members is \$1 per volume; single copies, 30 cents. All correspondence concerning memberships, changes of address and back numbers should be sent to CBC Headquarters, P.O. Box 1220, Tryon, N.C. 28782. Please notify Headquarters immediately of change of address.

All papers, census reports and notices for publication in *The Chat* should be sent directly to the Editor. However, items intended for the General Field Notes, Backyard Birding, or Conservation departments should be sent to the respective department editors.

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The Chat

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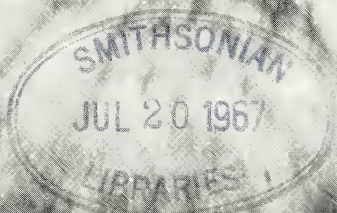
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OUR COVER—A male House Finch was found at Hartsville, S.C., by Willie M. Morrison, banded by E.C. Clyde, and photographed in hand by D.C. McLean. See pages 48-49 for more photographs of this aggressive newcomer to the Carolinas and some tips on identification.

OBSERVATIONS ON THE DIVING ABILITIES OF SOME COMMON SPECIES OF DIVING BIRDS

JOSEPH R. FATORA¹ AND ELAINE K. FATORA

During the winter and early spring of 1965, while censusing the waterfowl of the AEC Savannah River Plant, the authors measured a series of dives to determine the submergence time of several of the waterfowl common to the area. A literature search was then conducted to determine the present knowledge of the diving abilities of many of our common species of diving birds. Although it is known that many of these birds are quite adept at diving, the lengths of time they actually spend under water are largely unknown. The ecological relationships of diving time with type of food, availability of food, depth of water, and other influencing factors, are also unknown. Observations were made on the submergence time of the Horned Grebe (*Podiceps auritus*), Ruddy Duck (*Oxyura jamaicensis*), Bufflehead (*Bucephala albeola*), and the Lesser Scaup (*Aythya affinis*). These data are then compared with the results of observations existing in the literature by other investigators on the submergence time and diving ability of these four species.

PROCEDURE

The United States Atomic Energy Commission's Savannah River Plant, occupying parts of Aiken, Barnwell, and Allendale Counties, South Carolina, consists of a 200,831-acre tract located approximately 15 airline miles southeast of Augusta, Georgia, and 12 miles south of Aiken, S.C. It is bordered on the southwest by 27 miles of the Savannah River with its associated bottomland hardwood swamps. The Savannah River Plant lies entirely within the Upper Coastal Plain physiographic province; however, it is only a short distance south of the Fall Line, which demarks the plain from the more elevated Piedmont Plateau physiographic province. In 1951-1952 approximately 6,000 people moved off the site, and it was closed to the public on 14 December 1952. About one-third of the area had been in cultivation, and the site is dotted with old farms. The area is typical of much of the Upper Coastal Plain. Since public admittance to the area is prohibited, human disturbance is minimal, and the area abounds in many species of wildlife. The Savannah River Plant provides excellent opportunities for behavioral studies. Waterfowl are common on the site during the winter and spring months on Par Pond and on Carolina bays, small ponds, and waterways scattered about the site.

All of the observations were made on Par Pond, a large, deep artificial lake located in the southern portion of the Plant in Barnwell County. This lake was constructed as a water source for Plant operations. The dives were timed with a stopwatch, measuring to a tenth of a second. The data secured are presented in Table 1.

RESULTS

A Horned Grebe was timed diving in a deep area of the lake. The wind was blowing at sufficient velocity to make the water roily, enough to hide the little bird at times and make timing its dives difficult. At no time was it observed to dive for less than half a minute. In several instances the grebe would dive

¹This author was supported by McIntire-Stennis Project 12 and made the observations for this paper while conducting Bobwhite quail research on a cooperative project between the University of Georgia School of Forestry, the Georgia Forest Research Council, and the College Experiment Station on the Atomic Energy Commission's Savannah River Plant.

TABLE 1. *Diving times of some common waterfowl observed on the Savannah River Plant.*

Date 1965	Species	Dives Timed	Diving Time (seconds)			Standard Deviation	Standard Error
			Min.	Max.	Mean		
11 Jan.	Horned Grebe	9	36.0	55.4	46.1	6.4	2.1
19 Feb.	Ruddy Duck	15	30.0	40.0	33.8	3.2	0.8
28 Mar.	Ruddy Duck	10	36.0	40.0	38.5	1.4	0.4
11 Jan.	Bufflehead	25	13.6	27.0	20.3	3.4	0.7
19 Feb.	Bufflehead	10	24.0	28.0	25.6	1.5	0.5

and stay under for over 3 minutes, it being difficult to get an exact timing due to the roily water, the distance between the points where the bird dove and surfaced, and the fact that it was with a sizable flock of Ruddy Ducks. These dives of long duration were not used in computing the mean.

Much variation exists in the literature on the submergence time of the Horned Grebe. Heintzelman and Newberry (1964) timed two Horned Grebes on 30 November 1963 at Brigantine National Wildlife Refuge on the New Jersey coast, with means of 19.2 and 17.4 seconds. The birds did not remain submerged at any time for longer than half a minute. These authors, quoting Stone, whose data theirs closely approximate, state that the Horned Grebe remains submerged from 30 to 35 seconds as recorded along coastal New Jersey. Townsend (1905), in describing a grebe diving at Ipswich Beach, writes that when close to the rocks, grebes remained submerged for 30 to 35 seconds, while the same bird, when a short distance out from the rocks, remained under water for 45 to 50 seconds each time. Witherby et al. (1940) state that the usual length of dive recorded for the Horned Grebe appears to be nearly the same as for the Great Crested Grebe (*Podiceps cristatus*). They record a variation in the latter species from 12 to 50 seconds with an average of 26 seconds.

The fact that the Horned Grebe sometimes remains submerged for periods in excess of a minute can be documented from the literature, thus substantiating our observations. Palmer (1962) records grebes as frequently remaining submerged for over 1.25 minutes in deeper dives. Bent (1919), in quoting E. Howard Eaton, states that it has often been seen to remain under water for 3 minutes and to cover a distance of at least 30 rods at one drive. That the young of this species is very precocious and starts diving at a very tender age can be realized from the writings of Forbush (1912), in quoting Dawson, who states that a young bird, which he removed from the egg and placed in the water, immediately swam and attempted to dive. Thus this bird, which is quite at home on the water, begins diving early.

Two series of dives were timed on Ruddy Ducks. The observation on 19 February 1965 was made on a deep cove of the lake late in the afternoon on several different individuals in a loose flock of 35 to 40 birds. The observation on 28 March 1965 was made at the same area on a male for ten successive dives. On this same individual, ten intervals between dives were timed (Table 2). In addition, two dives by a female on a deep area of the lake in open water were measured on 11 January 1965. The duck remained submerged 51.6 seconds each dive. Thus, this species apparently remains submerged for at least somewhat less than a minute under normal conditions.

Heintzelman and Newberry (1964), at the Brigantine National Wildlife Refuge, measured the diving time of one Ruddy Duck and found a mean diving time of 19.8 seconds and a maximum of 21.8. This appears to be the only diving time existing in the literature, at least no mention of it is made in any of the popular works on North American ornithology. The diving abilities of

TABLE 2. *Time (in seconds) of 10 intervals between dives of a male Ruddy Duck on 28 March 1965.*

Minimum Interval	8.8
Maximum Interval	10.6
Mean Interval	9.8
Standard Deviation	0.5
Standard Error	0.2

this curious little duck are well known. Audubon (1840) writes: "They alight on the water more heavily than most others that are not equally flattened and short in the body, but they move on that element with ease and grace, swimming deeply immersed, and procuring their food altogether by diving, at which they are extremely expert." That even the young are expert at diving is documented by Miller (1891) who captured a pair of young Ruddies on Cape Cod, Massachusetts. He states they were very expert divers, remaining beneath the surface for a considerable length of time, and appearing again exposing the upper part of their head only. Bent (1925), in quoting William C. Smith, states that a wounded Ruddy Duck has often been observed to dive down, grasp a weed, and remain in this position for 20 minutes. However, whether the duck was alive or not at the end of this period is quite another matter.

Diving times were taken on the successive dives of two male Buffleheads. The observation on 11 January 1965 was made on a shallow, sheltered arm of the lake, the male being with several females. The ducks would dive within a few seconds of each other, however at least one was usually on the surface while the others were below. Several times the male was observed to shoot clear of the water from below and alight again a short distance ahead of the rest, who would quickly overtake him. This manner of feeding, with a "lookout" remaining on the surface to watch for danger, is considered by Bent (1925) to be the usual feeding procedure, and that it is only rarely that all go below at once. However, the male observed on 19 February 1965 was feeding with one female. Here, both birds were submerged at once, the female nearly always diving 1 or 2 seconds before the male and surfacing 1 or 2 seconds ahead of him. Only twice was the pair observed to dive simultaneously. On one occasion only did the male dive first, the female still surfacing before him. This observation was made on a deep cove late in the afternoon, the pair not being a 100 yards from shore.

At other times during the winter, Buffleheads were noted singly or in pairs, or small groups, on the open water and deeper coves, sometimes feeding in these small groups and all submerging at once. Even one bird has been seen to feed actively alone in this deeper water. Perhaps the birds have a greater feeling of security than they would have if feeding in a smaller shallow area close to shore.

Alford (1920) timed a large number of dives (181) and found that the Bufflehead remained submerged from 15 to 29 seconds, the average duration being 23 seconds. He further stated that the ducks would dive to depths of 2 fathoms (12 feet). Townsend (1916) in describing a group of 35 or 40 Buffleheads swimming together in a compact flock, all pointing the same way, says: "They dive within a few seconds of each other and stay under water 14 to 20 seconds, and repeat the diving at frequent intervals." This observer timed a total of eight dives, a series of four in the Back Bay Basin in the Boston Park System, varying between 14 and 20 seconds with an average of 18 seconds, and four dives at Lynn Beach, three of 17 seconds and one of 15 seconds duration. The fact that the Bufflehead has the ability to stay submerged for much longer periods is documented by Bent (1925) in quoting J.G. Cooper who states that

a wounded male was observed to dive in clear water, seize hold of an underwater root by means of its bill, and remain voluntarily submerged for nearly 5 minutes, whereupon he rose to the surface and attempted to effect his escape by paddling off.

On 28 March 1965 an attempt was made to time the dives of a Lesser Scaup in a deep cove of the lake late in the afternoon. We observed the bird for about 20 minutes, and during this period it dove four times, but it was possible to secure only one timing. The duck remained submerged during this dive for 42.4 seconds. This observation is not included here because this single timing is significant, but to point out the paucity of records in the literature of the diving abilities of this rather common species of waterfowl, with the hope that this might prompt someone to go afield with binoculars and stopwatch. A review of several important works on the ornithology of North America revealed no concrete data on this duck's diving ability or submergence time. Audubon (1840) writes of the Lesser Scaup: "Then turning its head and glancing on either side to assure itself of security, down it dives with all the agility of a merganser, and remains a considerable time below." Bent (1923) writes of this same species: "The lesser scaup, like its larger relative, is an expert diver and can remain under water for a long time, grubbing on the bottom for its food." This same author, quoting Vernon Bailey on the food habits of this species, states that the Lesser Scaups are great divers and keep in the open lakes, often in large flocks, where they dive for food. Kortright (1942) says they are "exceptionally good divers and swim for long distances under water," and Burleigh (1958) writes "they are capable of remaining under water for some time."

The only mention of a diving time that could be found in the literature is Wetmore's (1920) account of the courtship proceedings. He states that as the display continued, the male joined the female under the water more and more frequently, and finally both remained below the surface for over 30 seconds where copulation apparently took place.

DISCUSSION

Just how long do waterfowl and other diving birds remain submerged under natural conditions? Heinroth and Heinroth (1958) state that many diving ducks stay under water for a half to three-quarters of a minute. This would seem fairly accurate, at least for the three species mentioned above. Perhaps, one-quarter to three-quarters of a minute would be even more accurate. Welty (1962) observed that under natural conditions, diving birds rarely remain submerged for more than a minute. While this possibly holds true for diving ducks, it has already been stated that the Horned Grebe quite often remained submerged for durations of over a minute, and up to as much as 3 minutes.

It would also seem logical that a diving bird would spend the amount of time under water necessary for it to secure its food. This would explain the variations in length of dives. Heinroth and Heinroth (1958) write: "The length of time birds stay under water, and how fast and how deep they go, depends on what they do there." The diving times of the Ruddy, considering our observations and those of Heintzelman and Newberry (1964), show that the length of submergence varies from 17.4 to 51.6 seconds, with means for three series of dives of 19.8 (Heintzelman and Newberry), 33.8 (this study), and 38.5 (this study) seconds. While the variance of all observations in the three series of dives considered together is large, the individual variance for each series of dives is much less, and the Ruddy stays under for fairly consistent durations during the diving period. This can probably be explained by the influence of localized ecological conditions, e.g., the depth at which the principal food is found, the turbidity of the water, depth of water, the bird spending the amount of time under water necessary to secure its food.

The Bufflehead, on the other hand, shows a little more consistency in its dives. Comparing our data with that of Alford (1920) and Townsend (1916), the submergence time varied from 13.6 to 29 seconds for 224 dives, with means of 16.5 and 18 (Townsend), 20.3 (this study), 23 (Alford), and 25.6 (this study). We found the bird diving in deeper water remained submerged slightly longer than the bird feeding in shallow water close to shore.

The Horned Grebe diving times vary considerably. Observers have reported it as spending from 8.2 seconds to over 3 minutes submerged. Probably Townsend (1905) had the answer when he said that the duration of the dive under water depended somewhat on its depth as well as on the abundance of food there. As the Horned Grebe is, for a large part, piscivorous (Palmer, 1962), it would seem logical that it stays under for the length of time and dives to the depth necessary for it to capture a fish. The reason for the several long dives reported in our observations were unexplainable, the bird apparently doing this as part of its normal activity, and not from being subjected to any danger.

Diving birds have been known, however, to stay down much longer, diving as a means of escape, either under natural conditions to escape predators, or to elude hunters when wounded. Many of the divers, such as the grebes and loons, prefer diving over taking flight as an escape mechanism, and many of the diving ducks remain under water for a considerable length of time when wounded. Bent's (1925) observation on the wounded Bufflehead has already been recounted. The same author (1923) says of the scaup: "It swims away so rapidly under water when wounded that it is useless to pursue it; it is said by gunners to cling to the weeds or rocks on the bottom until dead; it seems more likely that in most cases it swims away to some place where it can hide or that it skulks away with only its bill above water." W.E. Clyde Todd, as quoted by Bent, said: "I once wounded a duck of this species in shallow water and, wading out to where I saw it last, I found it holding to a strong weed by its bill, 2 or 3 feet below the surface, stone dead." Numerous authors have published accounts such as this for various species of ducks, and a great deal of space could be taken up in recounting them here. Suffice it to say that many diving ducks, when wounded, remain submerged for great lengths of time and even prefer death by drowning if they are unable to effect an escape by other means.

How long can diving birds remain under water without drowning? No doubt the time varies considerably for the various species. Experimentally, Mallards (*Anas platyrhynchos*) have remained alive under water for 16 minutes (Welty, 1962). This is probably due, at least in part, to the fact that ducks have more blood per unit of body weight than many non-diving birds, with a higher concentration of hemoglobin in the blood and myoglobin in their muscles. Welty (1962) suspects that the air sacs can work air back and forth through the lungs while the birds are submerged.

SUMMARY

Submergence time and diving abilities of the Horned Grebe, Ruddy Duck, Bufflehead, and Lesser Scaup are discussed. It appears that under normal feeding conditions, these species remain submerged as a general rule for a quarter to three-quarters of a minute. This general rule can also apparently be applied to other species of diving ducks, while other divers, such as the Horned Grebe, may often times remain submerged for periods of time in excess of 3 minutes. These long dives appear to be part of their normal behavior. The length of time the diving bird spends under water probably depends on many factors, such as the depth at which the principal food is found, turbidity of the water, food availability, and others which, together with the individual's physical condition, influence its diving time. Some diving birds, notably the loons and grebes, use diving as an escape mechanism, both against natural predators and against man, remaining submerged for a great length of time either until the danger subsides,

shelter is found, or death by drowning overtakes them. Experimentally, Mallards have remained alive under water for 16 minutes, although this ability undoubtedly varies between species.

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APHIDS AS A SOURCE OF FOOD FOR MIGRATING WARBLERS

DORIS C. HAUSER

For several years a handsome silver maple tree (*Acer saccharinum*) in the yard of Mr. and Mrs. Volney Kyle, Fayetteville, North Carolina, has presented an interesting study in the taste preferences of bird species.

In mid-October of 1963 a little flock of Cape May Warblers (*Dendroica tigrina*) was discovered feeding on plant lice in the tree, and from 14 October through 19 October there were from one to twelve of these warblers present every day. This species customarily passes through Cumberland County in both spring and fall migration but is seldom seen, and even less often is it recognized in its fall plumage. Its prolonged stay in the fall of 1963 was due to a "population explosion" of aphids (*Drepanaphis* sp.) on which the Cape May Warblers fed with a single-minded obsession.

The intense interest of this warbler species in the aphids as a desirable food supply made the disinterest of other bird species even more remarkable. The Kyles' yard is in a residential area where almost every home maintains at least one bird feeder and the bird population throughout the year is abundant. In spite of this, only a few other birds were recorded feeding on the aphids during many hours of observation:

2 Catbirds (*Dumetella carolinensis*) perched and fed briefly on winged aphids as they floated past them.

1 House Sparrow (*Passer domesticus*) pecked aphids from the leaves.

1 Cardinal (*Richmondia cardinalis*) fed briefly one day.

1 Blackburnian Warbler (*Dendroica fusca*) spent 18 October feeding on aphids. Ruby-crowned Kinglets (*Regulus calendula*) were daily visitors to the maple tree for a feast of aphids.

APHID FORMS AND CHARACTERISTICS

Prolonged dry weather often helps aphids to attain great numbers such as they had reached in the fall of 1963. It is no wonder that the Cape May Warblers stayed to feast because when I first saw the tree there were aphids present on every leaf, twig and branch, and on the trunk to such an extent that it would have been difficult to find one square inch of surface that was free of these plant lice. On occasion, in the days that followed, the tree was enveloped in a cloud of winged aphids which may have served to attract the birds to the tree.

Also attracted to the feast was an interesting array of insect guests which included ladybugs (*Coccinellidae*) and lacewings (*Chrysopidae*), well known for their voracious appetites for aphids; one ant (*Prenolepis imparis*), a notorious attendant on plant lice which feeds on "honeydew"; and many brightly colored winged insects drawn by the sweet exudations of the aphids.

Aphids are minute insects belonging to the order Homoptera, family Aphididae, which feed on plant juices. Their mouth parts consist of a specialized apparatus of stylets, or sucking tubes, with which they penetrate the bark or leaf surface. In this way they tap a single cell of the tissue which transports the phloem, the products of photosynthesis which feed the growing plant. The excess food obtained from such a steady source of nourishment is exuded in the form of "honeydew," a sweet substance attractive to some insects. The lowly aphid, however, is not all sugar-and-spice for its defense mechanism consists of glands which can produce a bitter and foul-tasting fluid as readily as the insect can deliver its drop of honey.

TABLE 1. Warbler species seen feeding on aphids in October 1966 with the estimated maximum number present at any one time.

No.	Species	October 1966	15	16	17	18	19	20	21	22	23	24	25	26
3	Tennessee Warbler (<i>Vermivora peregrina</i>)		*	*	*	*	*	*	*	*	*	*	*	*
1	Orange-crowned Warbler (<i>Vermivora celata</i>)						*	*	*	*	*			
2	Parula Warbler (<i>Parula americana</i>)		*	*										
15	Cape May Warbler (<i>Dendroica tigrina</i>)		*	*	*	*	*	*	*	*	*	*	*	*
3	Black-throated Blue Warbler (<i>Dendroica caerulescens</i>)		*	*	*									
1	Myrtle Warbler (<i>Dendroica coronata</i>)					*								
1	Black-throated Green Warbler (<i>Dendroica virens</i>)				*									
2	Blackburnian Warbler (<i>Dendroica fusca</i>)			*	*									
2	Bay-breasted Warbler (<i>Dendroica castanea</i>)					*	*	*	*	*	*	*	*	*
2	Blackpoll Warbler (<i>Dendroica striata</i>)							*	*	*	*	*	*	*
5	American Redstart (<i>Setophaga ruticilla</i>)		*	*	*	*								

Aphids which hatch in the spring from eggs laid the previous fall, following a union of male and female forms, are all female and wingless. After a few days of feeding, they produce living female young which, in their turn, produce new series of living young in a form of reproduction known as agamic or asexual, and these females are called "stem mothers." For no apparent reason, throughout the summer, a generation of winged females may occasionally be produced which fly off to new plants to repeat this life process.

In the fall completely developed winged males, as well as females, are produced and the eggs which result from their union are deposited in bark crevices and other protected areas. The aphids which hatch from these overwintering eggs will be all female and wingless, prepared to repeat the annual cycle.

In reporting on the mixed lot of insects which I sent to the U.S. Department of Agriculture for identification, Louise Russell wrote that there were aphid forms of all the foregoing types.

OCTOBER 1966: THE MAPLE TREE, APHIDS, AND WARBLERS

A chance visit to the Kyles' maple tree on 15 October 1966 led to discovery of a repetition of the display which had so intrigued us in the fall of 1963. A prolonged dry spell was followed by an explosion of the aphid population which, once again, attracted Cape May Warblers to the feast, accompanied by migrating warblers of ten other types. Table 1 records the visiting warbler species and

the dates on which they fed on the aphids, from the day of their discovery throughout their visit. The number preceding each warbler species is an estimate of the greatest number visible at any one time during the visits of that species. The Tennessee Warblers represent a new species for Cumberland County records.

Only the Ruby-crowned Kinglet, of other bird species recorded in the tree, fed on aphids with any regularity. A Mockingbird (*Mimus polyglottos*) and a Yellow-bellied Sapsucker (*Sphyrapicus varius*) were each recorded only once.

WARBLER BEHAVIOR

The Cape May Warblers often displayed an aggressive character, suddenly diving at and chasing another bird of its own or another species. I saw no other warbler behaving in this manner.

Although warblers could always be found feeding in the maple tree, most of them came and went in small flocks, resting in nearby shrubbery in the interim. Occasionally as many as 25 or 30 might be feeding at the same time, or as few as two or three. While in the tree they fed constantly, shifting from one area to another for half an hour or more at a time, but never perching still to rest or preen.

A few of the warblers, unique because of feather or color variation, became individuals to us. Thus we knew that one Bay-breasted, first recorded on 18 October, remained through the 26th; that one of the Tennessee Warblers was present for 11 days; and that only one colorful male Cape May joined the others for a single day midway in their visit.

However satisfactory the feast of aphids may have been to the small migrating birds, it could not have approached the delight of our local bird-watchers in this Feast of Warblers. The height of our pleasure was probably expressed by a neighbor of the Kyles who wistfully declared, "I wish I had aphids in *my* garden!"

309 Sylvan Road, Fayetteville, N.C.

CONSERVATION

... AND THE CAROLINAS

MARIE B. MELLINGER, *Department Editor*

The Vanishing Bluebird?

In a special release to the *Savannah News-Press*, R.E. Ware of Clemson University stated that the "Bluebird is threatened with extinction." Prof. Ware also stated that the Eastern Bluebird is threatened by two bird competitors, the English Sparrow and the Starling. He urges the building of predator safe birdhouses, and offers plans to anyone writing for them.

We decided to make a bluebird survey of our own, and in late March, covered some 400 miles in several trips, about equally divided between woodland and farming areas. We listed the bird sighted, the seemingly suitable nesting holes available, and the number of bluebird houses. We listed 98 bluebirds, 78 supposedly suitable nesting holes, and 23 bluebird houses. We agree that the bluebird is becoming scarce, but feel that this is from a lack of suitable nesting sites rather than competition from other birds. There was a definite relationship between the bluebirds seen and available nesting holes (mostly in fence posts) and birdhouses. Too many modern farms have metal fence posts, or wooden posts of a type too small to hold a nesting cavity.

We were also appalled at the lack of birdhouses. Those we did see were almost entirely in the older farming areas. We saw acres of modern ranch houses, many with "lop-topped" boxwoods, or fancy statuary, but nary a birdhouse. Perhaps a birdhouse needs to be made fashionable, to become an "in" thing.

It would be helpful if every CBC member would put up at least one bluebird house. If you live in a city apartment, make a birdhouse gift to a friend or relative in the suburbs or some rural area. Perhaps a return to the celebration of the old time Arbor and Bird Day would also be helpful. I can remember when all the grade school children and youth clubs made birdhouses every spring. The child that builds and puts up a birdhouse is not likely to want to shoot every songbird he sees.

New and Timely

A group of conservation minded citizens in neighboring Georgia have formed the Georgia Conservancy, some of their purposes being "either independently or in cooperation with governmental bodies, to preserve or aid in the preservation of areas of scenic, geologic, biologic, historic, or recreational importance in Georgia — to establish, or aid in establishment of nature reserves — to develop organized programs in conservation education." Robert Haney of national Nature Conservancy has been employed to assist the Georgia group. One of their first acts was to have representation at the Wilderness Act Hearing at Waycross, Georgia, on having the Okefenokee Swamp kept an inviolate wilderness.

Rare and Endangered Species

Secretary of the Interior Stewart L. Udall is urging cooperation between the states and federal agencies in protecting rare and endangered species. A letter has been sent by John Gottschalk, director of the Bureau of Sport Fisheries and Wildlife, asking for study, and coordinated action between the heads of all state wildlife agencies and the federal government.

Water Fowl Survey

In another Dept. of Interior report, a survey of winter water fowl habitat has been compiled. On the Atlantic flyway, a poor mast crop in bottomlands of South Carolina caused a mid-December departure of puddle ducks. Scoter were abundant in Georgia and South Carolina, but no large concentrations of Scaup were noted. Fewer ducks were seen this year on the Atlantic flyway, but more geese were observed.

Booklet Available

Conservation News lists a booklet, *Tune in to Nature*, by Ruth Smiley, Lake Mohonk, Mountain House, New Paltz, Vermont 12501 (75¢), to "help develop an awareness of ecology, which is sadly lacking in most people today who walk through the woods and fields of America."

Conservation of Beauty

Spring is the time when you like to look at migrating birds and blossoming trees and flowers, but all too often, we are forced to view these with one eye shut to the man-made squalor surrounding them. Once, long ago, I heard a speech at a Conservation Camp, by Professor Franz Aust, entitled the *Conservation of Beauty*, and some how these words have stuck as something to be remembered through the years. Conservation should be more than just saving rare birds or animals, or conserving forests or natural resources, or creating a wildlife refuge; it should be all things in nature, a part of a beautiful and natural world.

A stranger coming to our land must look askance at our highways lined with billboards and littered with junk. If the stranger leaves the highway to follow some woodland trail, or a quiet country lane, he will see a fine natural area used for a trash dumping ground. Aside from the horrors of such sights to the sensibilities, the practical citizen must realize how our tourist image suffers from such a dirty countryside.

All over the country, conservationists are becoming more and more aware of the litter problem. One state has estimated that it cost \$40.00 per mile to rid its roadsides of litter. Some, and indeed most states have anti-litter laws, but most do not enforce them. Most effective seem to be those areas where the offender has a choice of paying a stiff fine or cleaning up a section of highway. Cleaning up even a quarter mile of littered roadway can be a great deterrent to scattering any more.

Even Norman Vincent Peale wrote a scathing editorial, printed in the Anderson, S.C., *Independent*, in which he said, "I would hope some gifted psychiatrist would make a study of the mentality that can ride through some of the noblest landscape God ever created and throw refuse out of car windows. Isn't there a relationship between ordinary neatness and effective organization of personality?" And in the same newspaper, Elizabeth Post wrote, "cans, bottles, paper, rags, and every type of trash found along any highway in the United States are a national disgrace."

The "Keep America Beautiful" people took a survey in 50 states, and 73% of the people interviewed said that men were the worst offenders, and were the nation's number one litterbugs. Maybe this will arouse the masculine wrath enough that they will clean up some of the haunts of Lucifer Litterbug and his nefarious offspring.

There is also a campaign on for "Beauty Without Billboards," for while a few well placed signs may be necessary, thousands of depressing billboards shutting off any view of trees or flowers can be obnoxious. One authority wrote that "our roadsides are becoming buyways instead of byways." Phoenix, Arizona, has set a good example by recently removing some 610 signs found "in trespass

on public lands," and further fining the owners of the billboards for illegal use of the land.

U.S. Highway 17, from the junction with U.S. 17A, near the Georgia-South Carolina line, and extending northwards is particularly unsightly with an accumulation of trash and a conglomeration of shacks and unsightly billboards that are a disgrace to a beautiful state.

What has all this to do with birding? First, many species of birds cannot thrive in such an environment, and second, such sights should be an offense to any of us birders who call ourselves nature lovers. Possibly we are all a little bit to blame, for where is our "ecological conscience" that Aldo Leopold wrote about? Perhaps we have been too busy chasing down that rare bird to add to our life list, and deserve Ernest Swift's indictment, "there are too many conservationists living in a dream world and shielding their eyes to all forms of land abuse by watching birds in the back yard." Many of us belong to garden clubs or civic organizations, or are educators or teachers, and have an opportunity to promote a cleaner and more beautiful Carolina.

Then too, too many of our birding areas are becoming dumps, and who wants to continue to bird in a dump?

Forest Fires

An unusually dry spring has increased the hazards of forest fires in the Carolinas, and everyone should be aware of the danger. According to a Dept. of the Interior Report of 10 March 1967, last year was a disastrous fire year with fires sweeping over a million acres of Interior Dept. lands, causing damage close to 15 million dollars. Of 2,914 fires recorded, 1,236 were attributed to human activity. This included a 1,273 acre fire in South Carolina touched off by an arsonist.

Backyard Birding

ANNIE RIVERS FAVER
Department Editor



More Hartsville Notes from Mrs. Morrison

By four o'clock on the afternoon of 2 November 1966, the temperature had dropped into the forties, wild-looking black clouds were building up in the northwest with gusts of wind up to 30 mph. For 15 minutes I had been watching how a Red-bellied Woodpecker coped with such weather. Between times he went about his business of finding food high in the post oak. When the gusts came, he stopped, dug his claws into the wood, turned his back to the wind with his body parallel to the limb. As he held on, down came his wings, braced to hold him secure. When all was calm again, he continued his search for insects.

During this time I kept noticing an unusual number of birds flying into trees and shrubbery, seemingly from all directions, in groups of three to seven or more. They were Myrtle Warblers, Tufted Titmice, Carolina Chickadees, Ruby-crowned Kinglets, and one Brown Creeper. Three White-breasted Nuthatches flew in and have remained with us ever since, a pair and an odd one. I went into the yard to get an estimate of Myrtle Warblers. There were seven to ten in a dozen large oaks and all around in the shrubbery and dogwood trees. I counted 125, and there could easily have been as many as 200 in this flock. By five o'clock, the storm was over and all the Myrtles had departed. All during January 1967 I have only had two that stay here all the time. I checked three ponds that are favorites of theirs where I have seen them in former years by the dozens. I only found six one afternoon and usually only two or three at the other ponds.

Two brown plumaged Purple Finches arrived at our feeders 28 November 1966. Last year they had come in on the 23rd. By 5 December 1966, two males and three females (or immature males) were regulars. All during December I never had over ten, three of which were colorful males. By 1 February 1967, only seventeen at the most had come in with about a third of them the rosy-purplish males. Apparently this is an "off" year for them.

Baltimore Orioles have made up for the lack of finches. They have been reported from all around town. Every day I feed from 15 to 25 on "gook" cooked up for them. I have seen seven males in full plumage feeding at the same time. What a glorious sight! The rest range from immature males already beginning to show a little black at the base of the throat, heads darker and bodies a rich deep yellow, to some females so dark that the yellow on them is hard to find. One thing that they do provokes me. For several years they have been ruining the blossoms on an "Empress" and a "Mrs. D.W. Davis" camellia

by eating the anthers off the stamens. They even go into the half opened buds so that when the flower opens, the petals are covered with black punctured marks from their toe nails. If they would just eat the Peony scale off the limbs and the Tea scale from the underside of the leaves, I would have it made camelliawise. A few camellia blossoms are well worth the price to pay to keep my backyard full of orioles.

South Carolina Bird Life says that the House Sparrow's nesting season starts in March. On the morning of 29 January 1967 I found a pair with a nest nearly completed. The female kept coming to the opening and looking about, apparently waiting for her mate to bring up more nesting material. He was on the fence and down in the yard searching. When he found something suitable, he would fly up and both would disappear into the interior. In 15 minutes I never saw her leave the nest, but just appear at the door. For the next three mornings I checked their progress, and they were still building.—WILLIE M. MORRISON, 1610 Home Ave., Hartsville, S.C.

CBC Members Far from Home

From Margarita, Canal Zone, we were delighted to have the following letter from Doris Simpson:

Greetings from a back yard far away! I've replenished the feeders twice this morning and I wonder, if I kept it up, just how many bananas these birds would eat! This is the preferred food...the riper, the better. But they think oranges are fine, too, and buttered toast is acceptable.

The birds of Panama are lovely...an embarrassment of riches. You try to identify them all, but it is pretty hopeless, and a humbling experience for a person who is used to being able to name about everything one sees. Every day here, something new shows up, sometimes an old friend from the States, sometimes something new and strange. The variety is endless.

The tanagers here are so beautiful. The Blue-gray Tanagers arrive at the feeder in small flocks. They seem to take the place of the Bluebirds at home and are about that size. They are a soft gray with round black eyes, blue-green wings and tail, with shoulder epaulettes in the males of a lovely sapphire blue. The "Sangre del Toro"...Crimson (or is it Scarlet?)-backed Tanager is a loud and lovely thing. His lower mandible is light blue and he wags his tail about and yells like a jay when he comes to the feeder. There is a pair of Clay-colored Robins that frequently use it.

We see Tennessee Warblers and Yellow Warblers, tho these latter are not our Carolina birds but some other race. There are a number of migrants to look out for. I haven't seen a Toucan here, but up the coast at White Beach I saw several.

There are forty species of hummingbirds down here. So far, I've identified one, a Rufous-tailed Hummer that visits the hibiscus blossoms each morning, and yesterday was taking a bath in our next door neighbor's sprayer. It perched on a twig, threw its head back and fluffed out its wings and all the body feathers and waited for the water to come its way. I was able to walk to within six feet of it.

The Shining Honeycreeper has been around only once in the two weeks I've been here. It is simply gorgeous, in shades of cerulean and sapphire, with black wings and red legs.

The most gorgeous oriole just lit on the feeder! He is a brilliant yellow—the color of a Chat's breast—with black face and throat and black on his wings. I'll have to look him up. Four Blue-gray Tanagers are strung like beads on the wire holding the feeder, waiting to see if the oriole will "bite"! There he goes.... I'm on the lanai about fifteen feet from the feeder. Pardon, while I go look up

(Continued on Page 54)

General Field Notes

THOMAS L. QUAY, *Department Editor*

Department of Zoology, North Carolina State University, Raleigh, N.C.

House Finch Records in the Carolinas, Winter of 1966-1967

The House Finch (*Carpodacus mexicanus*) was first recorded in the Carolinas by Eloise Potter, at Zebulon, North Carolina, being seen first on 22 November 1962 and collected on 26 February 1963 (*Auk*, 81:439-440). The occurrence and spread of the House Finch on the Atlantic seaboard was reviewed at some length by Mrs. Potter in the September 1964 *Chat* (Volume 28:63-68). A female House Finch in aberrant plumage was taken by Marjorie Duffield at Raleigh on 26 February 1966 (*Chat*, 30:68). A finch collected at Chapel Hill by Elizabeth Teulings on 23 February 1966 (*Chat*, 30:53,68) was first identified by T.L. Quay as a male House Finch; this bird was subsequently identified by Roxie C. Laybourne, Systematic Zoologist of the Bird and Mammal Laboratories of the U.S. Fish and Wildlife Service, in the U.S. National Museum, as a male Purple Finch in an unusual plumage. I am pleased to publish this correction, and to recognize again the dangers inherent in quick sight identification, especially of those specimens involved in establishing first records for states and regions.

Below are published records of House Finches in the Carolinas during the winter of 1966-1967—four in North Carolina and two in South Carolina. The record of Grimm and Shuler at Greenville, S.C., on 20 December 1966 constitutes the first sight record for South Carolina and is documented with photographs. The record by Willie Morrison on 8 March 1967 at Hartsville is the second record for South Carolina. The next "finch winter" may see the House Finches widespread in the Carolinas.—T.L. QUAY, *Department Editor*.

House Finch at Cary, N.C.—Mrs. R.A. Turbiville and I found a dead House Finch in the Greenwood Forest section of Cary, N.C., on 11 November 1966. Cary is just west of Raleigh, and within the Wendell-Raleigh-Chapel Hill region where a number of House Finches have been recorded this winter. Our bird had the appearance of a female, but had a tinge of red on the side of the head and on the rump. On 12 November I took the bird to the North Carolina State Museum where it was subsequently identified as a female House Finch and placed in the study collection.—Mrs. L.H. DAVIS, 717 Warren Avenue, Cary, N.C., 19 February 1967.

First Sight Record of House Finch in South Carolina.—In view of the rapid population increase and expansion of range of the House Finch (*Carpodacus mexicanus*) in the eastern states (Potter, *Chat*, 28:63-68), it was to be expected that this species would soon be recorded in South Carolina. However, as Mrs. Potter pointed out in private conversation, it seemed more likely that this species would first be found near the coast (rather than at an interior location like Greenville).

On 20 December 1966 Mrs. William C. Grimm noticed at her feeding station a dull-colored finch which seemed different from the numerous Purple Finches also present. The bird was subsequently seen by Mr. Grimm, Mr. and Mrs. C. Garvin Hughes, and Jay Shuler, and all agreed with Grimm's tentative

identification of the bird as a House Finch. All of the characteristics outlined in Mrs. Potter's article were noted, and the continued presence of the bird at the Grimms' window gave much opportunity for further study. On 6 and 7 January 1967 Jay Shuler and William Grimm obtained a series of color photographs in an effort to document the record. The lack of conspicuous streaking on the head and the curved culmen are diagnostic (Fig. 1). The unnotched tail was clearly seen and noted during the bird's stay at the feeder. This brown-plumaged House Finch (female or subadult male) seemed to follow a schedule separate from that of the Purple Finches. It usually showed up in the morning for the first time at about 10:00, long after the Purple Finches had come, and it departed earlier than the Purple Finches. It was last seen on 7 January 1967.—WILLIAM C. GRIMM, 15 Strawberry Drive, Route 3, Greenville, S.C., AND JAY SHULER, 43 Kirkwood Lane, Greenville, S.C., 26 January 1967.

First Record of House Finches at Winston-Salem, N.C.—On 6 January 1967 a male House Finch came to my window feeder, in company with three or four Purple Finches. I can get to within 2 feet of my feeder so I was able to distinguish the differences between the two species quite clearly. All the field marks were easily noted—brown-streaked sides, tail only slightly forked, beak more curved and less blunt than in the Purple Finch, crown and back light brown, red on sides of head extending toward nape, breast and rump red. The red on the breast was much like an elongated bib. The bird in general had a much more sleek appearance than the Purple Finch. I felt sure of my identification, but Royce Hough came to study it and added his sight identification to mine.

On 13 January a second male House Finch came with the first, and one has continued to come each day. No females have as yet appeared, but we continue to look for them.—MRS. GEORGE HILL, 1933 Angelo Street, Winston-Salem, N.C., 23 February 1967.

House Finches at Wendell, N.C.—The town of Wendell, 15 miles east of Raleigh, was the wintering site of the largest number of House Finches yet reported in North Carolina. The birds were discovered in late January 1967 when the Reverend Allen Wentz and his neighbors, Mr. and Mrs. W.J. Underhill, first noticed one or two adult males at their feeders. The visitors were recognized as being different from the familiar Purple Finches, but no immediate identification was made. Nothing in Peterson's *Field Guide* to eastern birds quite matched what the observers saw. For more than a week the identity of the strangers remained a matter of puzzlement and conjecture until Mr. Wentz sought help from other bird watchers by calling Bart Ritner's radio show "The Bird Watching Society," a popular weekday feature of station WPTF-AM, Raleigh. A detailed description brought a quick response. Mrs. R.A. Turbiville and Mrs. L.H. Davis of the Raleigh Bird Club went to Wendell on 8 February and made a positive sight identification after studying both a male and a female at the Underhills' feeder.

As soon as the presence of House Finches was confirmed, it became obvious that a flock of significant size was in the vicinity, not just two or three individuals. The birds were found to be regular visitors at several feeders around town, and the opportunity to band some of the birds appeared to be excellent. On 13 February Elizabeth Teulings and Eloise Potter set up mist nets at the Underhills' feeding station and at the home of Mr. and Mrs. Cecil Perkins. Ten House Finches were banded during the day, three of which were adult males. Six other unbanded birds were seen in the area after banding operations were terminated, hence at least 16 House Finches were known to be present. I believe that the total population probably exceeded this number but no supplementary census data are available to prove the point.

As a follow-up to the banding work, one of the Wendell House Finches in adult male plumage was collected on 15 February and taken to the U.S. National Museum in Washington, D.C., for expert examination. The species identification was verified as *Carpodacus mexicanus* by Roxie C. Laybourne, and the specimen was returned to the collection at North Carolina State University (#821A).

Departure of the House Finches from Wendell occurred near the end of March. Mr. Wentz, who kept a daily record, last saw the birds at his feeder on 27 March.—ROBERT P. TEULINGS, *Route 2, Chapel Hill, N.C., 18 April 1967.*

House Finch Banded at Hartsville, S.C.—On 8 March 1967 at 2:00 PM my husband and I noticed on the ground under the sunflower seed feeders what appeared to be a male House Finch. After Mrs. Pinckney A. King agreed with our identification, I sent Eloise F. Potter a detailed description of the bird. Believing my identification to be accurate, she urged me to have the bird collected or at least trapped, banded, and photographed in hand. Consequently I asked E.C. Clyde, an experienced bird bander from Effingham, S.C., to assist me in proving the presence of a House Finch at Hartsville.

On 25 March Mr. Clyde tried unsuccessfully to trap and photograph the finch. He instructed my husband and me in the operation of the trap and told us how to care for the bird until he could drive from his home to Hartsville. The finch was trapped on 28 March, but it escaped after being removed from the trap and before any photographs could be taken. The bird left all but one of its tail feathers in my husband's hand. Realizing that these feathers might be adequate to prove the record, I sent them to Mrs. Potter, who forwarded them to the Bird and Mammal Laboratories of the U.S. Fish and Wildlife Service.

The now tail-less finch was seen off and on until it was again trapped on 11 April. Mr. Clyde and Dr. and Mrs. David C. McLean of Florence, S.C., examined the bird, found it to be in good health with new tail feathers about a half-inch long, and concurred in the identification as a subadult male House Finch. Dr. McLean photographed the bird (Fig. 2). Then Mr. Clyde banded it with USF&WS 73-60281 and released it at the site of capture. The House Finch was last seen in our yard on 20 April with the band and rapidly growing tail feathers both apparent.

Roxie C. Laybourne confirmed the identification as *Carpodacus mexicanus* on the basis of the feathers sent to her office. These feathers have been retained at the U.S. National Museum and constitute the first specimen evidence of the House Finch in South Carolina.—WILLIE M. MORRISON, *1610 Home Avenue, Hartsville, S.C., 25 April 1967.*

House Finches at Chapel Hill, N.C.—On 21 March 1967, at 9:00 AM while watching the Purple Finches (*Carpodacus purpureus*) feeding at my backyard bird feeder in Chapel Hill, I observed a male House Finch (*C. mexicanus*). During close observation of the finches the remainder of that day I saw a total of two male and three brown-plumaged House Finches. During the following day this group of five House Finches fed continuously with the Purple Finches. Later this same morning, 22 March, Mrs. Robert P. Teulings came to my feeding station and set up a mist net. She was able to catch and band one male and two brown plumaged House Finches along with several Purple Finches. It was thus possible to make detailed comparisons of the two species with birds in the hand. Close up photographs were made while the birds were hand-held (Fig. 3). One or more of the House Finches were observed on the subsequent days—23, 24, 25 March. On 26 March, even with close observation, only two males were seen. One to three House Finches continued to visit the yard daily until 4 April, after which no more were observed.—ROBERT M. GEIST, *220 Ransom Street, Chapel Hill, N.C., 5 April 1967.*

HOUSE FINCH RECORDED IN SOUTH CAROLINA

Jay Shuler photographed a brown-plumaged House Finch at the Greenville home of Mr. and Mrs. W.C. Grimm to document the first sight record of the species in South Carolina (Fig. 1). A male House Finch was photographed by D.C. McLean after it was trapped for banding at the home of Mr. and Mrs. A.E. Morrison in Hartsville, S.C. (Fig. 2). This is the same bird which appears on the cover of this issue.



Figure 1



Figure 2



Figure 3. House Finch (upper) and Purple Finch (lower) were photographed together by Robert M. Geist of Chapel Hill, N.C. Both birds have the brown plumage which may be worn by the females or the young males of these two species. Note the fine streaking of the House Finch as compared to the Purple Finch and the absence of strong facial markings in the House Finch. An adult or nearly adult male House Finch has a rosy rump, red forehead and line above eye, and a red throat patch which may extend into the upper breast. The breast below the red throat is well streaked with brown (Fig. 2). When the underparts of adult male Purple Finches are streaked at all, these markings are usually faint and confined to the sides.

BRIEFS FOR THE FILES

Compiled by JAMES F. PARNELL
Department of Biology, Wilmington College, Wilmington, N.C.
(All dates 1966 unless noted.)

- Glossy Ibis**, 1 was found at Fayetteville, N.C., on 24 September by Doris Hauser and Derb Carter Jr.
- Brant**, 1 was at Long Beach, N.C., on 2 November, and 2 were at Huntington State Park, S.C., on 19 November, Mrs. N. Currie Jr.
- Pintail**, 2 were seen on 15 December at the Savannah River Atomic Energy Plant, S.C., Joseph Fatora.
- Shoveler**, 6 wintered at the Savannah River Plant, Joseph Fatora.
- Redhead**, 3 at the Savannah River Plant on 25 November, Joseph Fatora and Richard Conley.
- Canvasback**, 1 on 25 November at the Savannah River Plant, Joseph Fatora.
- Gadwall**, 1 seen at Clemmons, N.C., on 26 December by A.A. Baker and Yel Cowherd.
- Greater Scaup**, flocks of 5 and 10 observed carefully near Raleigh, N.C., on 23 and 24 March 1967 by Harry and Edward LeGrande and Dale Lewis.
- Common Scoter**, a single female or immature bird was seen near Southern Pines, N.C., on 29 October by Delores Draughn and Jay Carter.
- American Merganser**, seen near Raleigh on 28 January and 4 February 1967 by Robert Hader, and again on 12 February by Harry and Edward LeGrande.
- Western Sandpipers**, 1 was found at Raleigh on 9 April 1967 by Mike Browne.
- Ring-billed Gull**, 17 were found inland at Winston-Salem, N.C., on 25 and 26 February 1967 by C.R. Hough.
- Bonaparte's Gull**, 4 were found at L. Wheeler south of Raleigh on 9 April 1967 by Mike Browne.
- Razorbill**, 1 collected by Eugene Pond at Cape Lookout, N.C., on 10 December. The skin is now in the North Carolina State Museum of Natural History.
- Ground Dove**, 2 found at Carolina Beach, N.C., on 20 August by Derb Carter Jr.
- Saw-whet Owl**, 2 killed by cars in the Carolinas. One was struck at Chapel Hill, N.C., on 9 November by William P. Rhodes and reported by Robert Teulings; and the second was killed near Kline, S.C., on 30 December by William Post.
- Ruby-throated Hummingbird**, 1 was studied closely at Beaufort, N.C., on 31 January 1967 by Eugene Pond.
- Red-headed Woodpecker**, an immature bird was seen on 23 January 1967 at North Wilkesboro, N.C., where the species is unusual, Wendell P. Smith.
- Philadelphia Vireo**, 1 found at Southern Pines on 17 September, Jay Carter.
- Yellow-breasted Chat**, 1 was seen regularly at a feeder in Charlotte, N.C., from 22 December to 12 March by Mrs. K.M. Peejer.
- Tennessee Warbler**, 3 at Fayetteville on 15 October by Doris Hauser.
- Western Tanager**, an immature male was seen regularly at Wilmington, N.C., between 1 March and 20 March 1967, Ruth Loman and Edna Appleberry.
- Evening Grosbeak**, only 4 records from the Carolinas. 10 were seen on 31 January 1967 at Clemson, S.C., by K.R. Helton, and 1 was seen on 2 and 16 January at North Wilkesboro by Wendell Smith. Raleigh and Greensboro recorded 1 each on the Christmas bird count.
- Rose-breasted Grosbeak**, 1 remained at Wilmington from 1 February until early April 1967, Mrs. W.M. Messinger and Edna Appleberry.

Dickcissel, a male was seen singing on a wire at Wrightsville Beach, N.C., on 21 March 1967 by Harry and Edward LeGrande.

Red Crossbill, 1 was studied carefully on 12 March 1967 by Lee Jones, Mike Browne, and Dale Lewis at Raleigh. On 21 March 1 was found at Umstead Park just west of Raleigh by Oliver Ferguson and Charles Wheeler.

Tree Sparrow, 1 at Winston-Salem on 26 December seen by A.A. Baker and Yel Cowherd, and 1 at Chapel Hill on 26 November by Robert Teulings.

Correction.—Walter Dawn has brought to our attention an error in the March 1966 *Chat*, page 25. The Eared Grebe was collected at Charleston, S.C., on 14 January 1959 (*Chat*, 23:62; *Auk*, 76:521), not in December as the date was given incorrectly in the note by J.F. Parnell.

BOOK REVIEWS

BIRDS IN OUR LIVES. Alfred Stefferud, editor; Arnold L. Nelson, managing editor; Bob Hines, artist. U.S. Dept. of the Interior, U.S. Government Printing Office, Washington, D.C. 1966. Illus. Index. 561 p. \$9.00 (from Superintendent of Documents, Washington, D.C. 20402).

In the preface to *Birds in Our Lives*, the editors say their aim is "to give a wide perspective of birds as they affect and are affected by people, other birds, and other forms of life and activities." To do this the editors assembled 54 chapters by 61 authors, a color frontispiece of the Bald Eagle, 80 wash drawings, and 372 photographs. Bird watchers will find many familiar and respected names among the contributors: John W. Aldrich, Carl Buchheister, Roland C. Clement, Allan D. Cruickshank, Joseph J. Hickey, John Kieran, Roger T. Peterson, Olin S. Pettingill, Chandler S. Robbins, and John Vosburgh—just to mention a few. Carolinians will be proud to see that Jack Dermid was a major contributor of photographs. The subject matter ranges from birds in the Bible to birds on stamps and coins; from bird banding to pigeon racing; from stream and air pollution to the Migratory Bird Treaty Act; from the harm birds can do to crops to the harm pesticides can do wildlife.

Obviously a book combining the efforts of many talented people cannot fail to be interesting; but with chapters written from so many diverse points of view, it is also sure to have something to please and offend almost everyone. Ardent conservationists may feel the book is "soft on hunters and pesticides." Hunters, farmers, and chemical manufacturers may feel the book is partial to National Audubon Society. The potential conflicts are almost endless. And perhaps this is the real point of the book. In the United States there is a limited amount of land, water, and air. How can these be used for farming, industry, recreation, transportation, communication, *and* conservation of wildlife without having the needs of one area of society conflicting unnecessarily with the needs of others? Resolving conflicts in usage of our natural resources is the role of the Department of the Interior. Thus the book becomes not just a book about birds but also the story of government in the conservation movement.

It seems to me that *Birds in Our Lives* has a place on the shelves of our school libraries. The chapters on stamps, coins, hunting, and falconry are sure to attract the interest of young people, many of whom will undoubtedly read further. The book is a particularly good classroom reference because various

chapters would be useful in government, history, health, agriculture, art, and literature courses as well as in natural history projects.

Unfortunately the proofreading of *Birds in Our Lives* leaves much to be desired. Most of the typographical errors would be noticed only by very observant readers, but every child who even glances at page 146 will let the whole class know that a picture of Cub Scouts has a cutline reading, "Brownie Scouts display bird feeders they made to parents and leaders." Even this is useful teaching material since children are never too young to learn that any publication, however attractive and nobly conceived, is likely to contain some errors and that something is not necessarily true just because it appears in print.—ELOISE POTTER.

HANDBOOK OF BIRDS OF EASTERN NORTH AMERICA. Frank M. Chapman. Republished by Dover Publications, Inc., 180 Varick St., New York, N.Y. 1966. Illus. Appendix. Index. 581 p. Paperbound, \$3.00.

Chapman's *Handbook* first appeared in 1895, and it remained the standard guide for eastern North America for about 45 years. While several excellent bird guides are definitely better suited for present day field use, Chapman's work is of historical interest and still has much practical value when one has an opportunity to study birds in hand.

Dover offers an unabridged republication of the second revised edition, but it differs from the 1939 edition in certain respects which the purchaser should keep in mind. For example, the page size has been enlarged to increase legibility, and a new color chart was prepared by Miss Helen Hays of the American Museum of Natural History. Certain color plates from earlier editions are reproduced as black-and-white halftones. However, no attempt was made to adapt the text to the 1957 AOU *Check-list*.

Frank Chapman (1864-1945) was Curator of Ornithology at the American Museum of Natural History for over 30 years, was an associate editor of *Auk*, and was founder of *Bird-Lore*, which is now *Audubon Magazine*. His reputation as a great ornithologist is based on many accomplishments, but his place among the outstanding men of natural science would be secure if he had written his *Handbook* and nothing else.—ELOISE POTTER.

SOUTH CAROLINA MAMMALS. Frank B. Colley. Illustrated by Priscilla M. Colley. The Charleston Museum, Charleston, S.C. 1966. Appendix. Index. 181 p. \$6.00 (plus 33¢ for sales tax and postage).

The late Robert H. Coleman (1893-1962) was a mathematician by vocation and a mammalogist by avocation. His extensive collection of skins and skulls was given to the Charleston Museum where it is housed as a separate entity known as the "Coleman Collection." A primary purpose of *South Carolina Mammals* is to summarize and report unpublished records from the Coleman and Charleston Museum collections in a form useful to both laymen and professionals. Certainly anyone interested in mammals of the southeastern United States will want to add this volume to his library. Those who knew Professor Coleman will especially appreciate the personal recollections offered in the biographical sketch by E. Milby Burton, director of the Charleston Museum.—ELOISE POTTER.

IN MEMORIAM

ARCHIE DAVIS SHAFTESBURY

A charter member of Carolina Bird Club, a past president of the club, and a former editor of *Chat*, Archie Davis Shaftesbury, 74, died in a Greensboro hospital a few hours after suffering a cerebral hemorrhage at his home 9 April 1967. Dr. Shaftesbury was elected president of CBC in May 1941. He became editor of *Chat* in 1944 and served in this capacity for seven years.

A native of Kansas, he did his undergraduate work at Southwestern College in Wichita. He served with the 89th Division A.E.F., U.S. Army 1918-1919. After four years as Assistant in Biology at Johns Hopkins University, where he received his Ph.D. in 1934, he taught at the University of North Carolina at Greensboro from 1924 until his retirement as Professor of Zoology in 1959. He founded and was Director of the Carolina Marine Laboratory at Beaufort, N.C., from 1937 to 1959. He was acting head of the Biology Department at Lenoir Rhyne College from 1959 to 1962 and was Visiting Professor of Biology at Greensboro College from then until his retirement in 1965.

Dr. Shaftesbury was a founding member of the North Carolina Entomological Society, Piedmont Bird Club, and the Greensboro Astronomy Club. He was a member of the North Carolina Academy of Science, American Society of Zoologists, American Genetic Association, American Ornithologists Union, Wilson Ornithological Club, Cooper Ornithological Society, Association of Southeastern Biologists, Sigma Xi, Kiwanis Club, and a 50-year member of Odd Fellows. He was a lay speaker in the Methodist Church.

As a teacher, he required a high standard of excellence for his students, many of whom continued their studies and obtained advanced degrees in various fields of science. Thus through the classroom and these various professional and civic organizations, Dr. Shaftesbury influenced conservation efforts throughout the United States.

Surviving are his wife, the former Catharine Cox, and a sister, Mrs. Herman Schipper of Albuquerque, New Mexico, to whom the club members extend heartfelt sympathy.

An affectionate tribute to Dr. Shaftesbury was prepared by Virginia B. Douglas and read by George A. Smith at the meeting of Piedmont Bird Club on 20 April. It said in part: "Brilliant, full of zeal and fire, Archie was an outstanding college teacher for more than forty years. Feeling that science is less than useless without a belief in God and a dependence upon Him, Archie shared his convictions within and without the college walls. . . . He was always anxious to extend his knowledge of biology and of the world in general, and with his Catherine undertook coast-to-coast field explorations, forever experimenting, forever learning, forever enlarging his teaching ability. Few could have better loved a chosen profession."—ELOISE F. POTTER.

BACKYARD BIRDING

(Continued from Page 44)

our new visitor. It was a Girand's Oriole . . . not too common. His back was completely yellow.

Yesterday a whole family of Orchard Orioles came through the yard . . . an adult male, an immature male and three females. Tom says last fall he saw five Baltimore Orioles in the same tree.

There are five tanagers that come and go: the Blue-gray, Crimson-backed, Black and Gray, Yellow-rumped and White-line. The first two are the common ones.

Also, I've seen but one manakin and that was in a little bamboo cage at the side of a house in Porto Bello. There are many rare and strange things yet to see, but I'm kept busy and happy with the local fare!

Comments on Peanut Butter and Window Casualties

On the question of feeding peanut butter to birds: Alfred G. Martin, in his book *Hand-taming Wild Birds at the Feeder* (1963), cautions against a straight diet of peanut butter, stating that it causes loss of gravel in the gizzard, with subsequent malfunction and shrinkage. The liver then enlarges and the bird soon sickens and dies. He also states that chickadees are particularly affected by a peanut butter diet, gorging themselves and carrying off an extra beakful to store away. When they attempt to deposit this hoard, it sticks to the roof of their mouths and they soon choke to death.

Mr. Martin also states that an egg-laying female chickadee on a peanut butter diet is apt to die of egg-binding. He has examined several dead chickadees, and though some of his naturalist friends disagree with his theory, he found the combination of peanut butter and egg-binding. He does not mention egg infertility in connection with peanut butter.

On Carol Grenell's warning not to freeze a stunned bird until efforts have been made to revive it: I have not been able to make such elaborate attempts, as the birds which hit our windows usually are the larger ones and their weight makes the crash a fatal one. However, when smaller birds are involved, such as American Goldfinches and Pine Siskins, they are only temporarily groggy. I have aided half a dozen of these little ones by cupping them in my hands and gently stroking their heads until the wild heartbeat is calmed. When they progress to resting quietly in one hand, I place the other index finger on their toes—they instinctively perch on it. If no flight effort is indicated, I drop the finger a few inches to encourage wing action to determine if there is wing injury; it normally causes flight to a nearby limb for further recuperation.

One such revival led to unusual intimacy with a Pine Siskin, re-identified by a deformed foot. This bird came to my hand several times to feed, and nestled down in my palm as if memory assured safety.

Closing drapes or curtains in late afternoon, if the sun shines through the house, will prevent many window crashes.—MRS. EDWIN B. NICKERSON, 18 Selwyn Drive, Greenville, S.C.



Founded 6 March 1937

Incorporated 8 August 1949

Carolina Bird Club is an incorporated association for the study and conservation of wildlife, particularly birds, chiefly in the Carolinas. Founded in 1937 as the North Carolina Bird Club, it was joined in 1948 by several South Carolina natural history clubs and the name changed to the Carolina Bird Club.

MEMBERSHIP

The Carolina Bird Club, Inc., is a non-profit educational and scientific organization. Dues, contributions and bequests to the club are deductible from State and Federal income and estate taxes. Membership is open to anyone interested in birds, natural history and conservation. The several classes of membership are listed below. Checks should be made payable to Carolina Bird Club, Inc., and sent to CBC Headquarters, Box 1220, Tryon, N.C. 28782.

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All papers, census reports and notices for publication in *The Chat* should be sent directly to the Editor. However, items intended for the General Field Notes, Backyard Birding, or Conservation departments should be sent to the respective department editors.

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The Chat

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September 1967

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The Chat

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OUR COVER—A day-old Killdeer chick was photographed in Wake County, N.C., by Jack Dermid.

STATUS OF THE RAZORBILL IN THE CAROLINAS

H.L. JONES

On the morning of 16 February 1964, Julian Meadows and I found a dead Razorbill (*Alca torda*) near the north end of Wrightsville Beach, North Carolina. The bird was slightly oiled on the head, but otherwise was in excellent condition. The specimen was prepared by James Parnell and placed in the bird collection at North Carolina State University.

Reviewing the published reports of Razorbill observations along the southern coastal states, I found twenty-three records for North Carolina, four for South Carolina, none for Georgia, and one for Florida. There appears to be a sharp drop in the number of observations south of the Beaufort-Cape Lookout region, as indicated in Table 1. According to these records, all occurrences of the Razorbill in the Carolinas are from 10 December until 12 March, with the majority of birds being recorded between mid-January and mid-February, as would be expected. This bird cannot be considered anything more than a regular winter visitor at best along the North Carolina coast and only a rare visitor to South Carolina. On the average there has been only one North Carolina record every third year since it was first recorded at Morehead City in 1889. There was a substantial increase in the number of reports between 1933 and 1938 with a lull immediately following in which there were no records for nine years (perhaps due, in part, to a lack of observers during World War II).

Since 1938 there have been no more peak years for Razorbills in the two Carolinas. In fact, there has been precisely one record each winter since the winter of 1957-1958 with the exception of the winter of 1963-1964 when two were recorded. The increase in the number of observations in the 1930s began in 1933 with the first record from south of Morehead City and reached a peak in 1937 when Sam Walker recorded 18 Razorbills near Pea Island in mid-January. It should also be interesting to note that during this same winter Walker reported a thousand or more Dovekies (*Plautus alle*) and a Thick-billed Murre (*Uria lomvia*) in the same region. Immediately following the period of nine years (1939 through 1947) when no observations were made, came the first record for South Carolina, an oiled bird picked up by Julius S. McDonald on Pawley's Island 12 January 1948. The first record for Florida did not occur until 1 January 1967 (Cruikshank, 1967), and coincided with a major influx of alcids along the North Carolina coast.

The increase of records in the 1930s may have prompted Pearson, Brimley, and Brimley (1942) to state that the Razorbill is a "winter visitor along the coast, apparently becoming more common in recent years . . . due to the Migratory Bird Treaty (1918) between Canada and the United States." Even though there have been no more periods of influx since that time, the number of records has increased significantly in recent years. But perhaps this is deceiving. Three factors should be considered in correlation with this increase: (1) the number of observers in the Carolinas has increased far more rapidly than the number of Razorbill observations, (2) many parts of the coast, such as Bodie, Hatteras, and Ocracoke Islands, are more accessible today than formerly, and (3) most of the recent records have been of oil-soaked birds that probably would not have been seen had they not been washed ashore.

This third factor, though a probable reason for the increasing number of recent records, could, at the same time, be the very reason for an actual decline in the population itself. The fact that one-third of the published records are of oiled birds and nearly all of the recent records are of oiled birds, strongly supports this reasoning. Of the nine records (20 birds) reported from the Carolinas in the last 10 years, 1957 to 1967, five were of oiled birds; whereas, of

TABLE 1. Published records of Razorbills (*Alca torda*) occurring south of Virginia, listed geographically from north to south.

Location	Date	No. Birds	Comments	Reference
Currituck Sound, N.C.	29 January 1923	1	Specimen collected	Auk, 40:317
Currituck Sound, N.C.	26 or 27 January 1938	1	Oil-soaked	Chat, 2:11
Nags Head, N.C.	late February 1960	1	Badly oiled	Chat, 25:42
Duck Is. Club, Oregon Inlet, N.C.	20 February 1927	1	Collected	Birds of N.C.
Pea Island, N.C.	16 January 1935	1	Oil-soaked	Auk, 52:319
Pea Island, N.C.	mid-January 1937	18	Raft off shore	Birds of N.C.
Pea Island, N.C.	early February 1938	?		Birds of N.C.
New Inlet, N.C.	19 December 1936	3	Partly destroyed	Birds of N.C.
Cape Hatteras, N.C.	24 January 1938	1	Oil-soaked	Chat, 3:14
Cape Hatteras, N.C.	1 February 1959	1	Collected	AFN, 13:284
Harbor Is.-Portsmouth area, N.C.	19 January 1927	1	Collected	Auk, 44:427
Ocracoke Island, N.C.	14 January 1927	1	Collected	Birds of N.C.
Ocracoke Island, N.C.	18 January 1933	1	Collected	Birds of N.C.
Cape Lookout, N.C.	15 February 1890	1	Collected	Auk, 7:203
Cape Lookout, N.C.	February (?) 1890	2	Collected	Birds of N.C.
Cape Lookout, N.C.	12 March 1961	1	Found dead	Chat, 25:74
Cape Lookout, N.C.	10 December 1966	1	Collected	Chat, 31:50
Beaufort, N.C.	late January 1951	1	Swimming off shore	Chat, 15:56
Atlantic Beach, N.C.	1 January 1952	1	Possibly injured	Chat, 16:25
Morehead City, N.C.	"after Christmas" 1889	2	Collected	Chat, 4:76
Bogue Inlet, N.C.	14 February 1962	1	Alive on beach	Chat, 26:49
New River, N.C.	21 January 1933	1	Caught alive	Birds of N.C.
Wrightsville Beach, N.C.	16 February 1964	1	Slightly oiled	present paper
Wrightsville Beach, N.C.	30 December 1965	12	$\frac{1}{2}$ mile off shore	Chat, 30:15,24
Pawley's Island, S.C.	12 January 1948	1	Oil-soaked	S.C. Bird Life
Bull Island, S.C.	15 February 1963	1	Oiled	Chat, 28:51
Sullivan's Island, S.C.	winter 1957-1958	1	Oil-soaked	AFN, 12:270
Charleston, S.C.	12 March 1964	1	In flight off shore	Chat, 30:26-27
S. Melbourne Beach, Fla.	1 January 1967	1	Caught alive, immature	Fla. Nat., 40:48

the eighteen records prior to 1957, only three were of oiled birds, those having been reported in 1935, 1938, and 1948.

The increasing number of oiled Razorbills reported in recent years indicates that indiscriminate handling of industrial wastes may well be offsetting the benefits of protection on the nesting grounds. This situation is undoubtedly true of other sea birds that have turned up along our coasts badly oiled in recent years, and only emphasizes the need for considering the oceans, along with inland bodies of water and estuaries, as part of our water pollution problem.

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Department of Zoology, North Carolina State University, Raleigh, N.C.

REQUEST FOR BLACKBIRD ROOST DATA

During the winter of 1967-1968, further efforts will be conducted to locate and describe the numerous winter blackbird roosts in the Carolinas. This information is of vital importance not only to agriculture but to public health as well. Growing evidence indicates that many species of wild birds harbor viruses, bacteria, and protozoan parasites which may represent potential health hazards to humans. There is a vast amount of basic research yet to be done in this field, and the location and description of these huge concentrations of blackbirds is the first step in the study of their complex parasitology. Any information concerning the location, size, composition, and history of blackbird roosts is vitally needed. I would greatly appreciate it if local clubs and individuals would cooperate during the fall and winter months in locating and if possible describing these roosts. This data will form the basis for extensive future work in a comprehensive study of the parasites and diseases of these birds. This approach to research is an excellent example of how an organization such as the Carolina Bird Club can make a significant contribution to the study of an ornithological problem. All information, references, and suggestions will be greatly appreciated.—MARK SIMPSON JR., Charlotte Country Day School, 1440 Carmel Road, Charlotte, North Carolina 28211.

Backyard Birding

ANNIE RIVERS FAVER
Department Editor



Up-town Birding

From W.C. Stone of Chester, S.C., comes the exciting news:

"Residents of Chester, South Carolina, are having a treat! A Swallow-tailed Kite was first observed over the business district of Chester on Tuesday, August 1. It was seen on August 2, 3, and 4, also over the city. Definite identification was made by members of the CBC, National Audubon Society, and the Wilson Society.

"This beautiful bird is truly one of the most graceful, and has thrilled many persons who stopped to watch it with its dives, turns, and swoops. Occasionally it seems to hover just over the tallest buildings down town, giving everyone a chance to study it in detail. Then it soars to such heights that it can hardly be seen, only to dive and turn on its way to treetop heights again.

"Despite the fact that the City of Chester is already a Bird Sanctuary, local CBC members requested radio station WGCD to ask publicly that care be taken not to destroy this rare visitor to our city. The description of the bird and its aerial activity was given, and this has resulted in quite a few bird-watchers lining up on the sidewalks to view this unusual spectacle."

Melanistic Junco at Chapel Hill, N.C.

On the afternoon of March 3, 1967 we had a rare visitor. This was a melanistic Slate-colored Junco—completely black as to feathers. This bird, a member of a small flock (8-10) of "normal" Juncos, was observed for some time from a distance of 10 to 15 feet. All feathers were a deep, rich black, very similar in color to the black feathers on a male Rufous-sided Towhee which was also in close range at the same time. There was no light-colored underbody, and no white in the tail. Beak and legs were approximately normal in color; but, by comparison with normal companions, I judged that they were *very* slightly darker than normal. My wife and I watched this bird at close range for 10 or 15 minutes. It was definitely a member of the flock, but seemingly not completely accepted by its fellows, as it seemed to be keeping a slightly greater distance from the others than did the remainder of the group.

When I went into the house to get my color camera, the Junco, in strict accordance with "Finagle's Law," flew off. Our close neighbors, the R.B. Sharpes, telephoned about half an hour later to say that a small flock of Juncos, including the melanistic individual, had been at one of their feeding stations. Their observations as to appearance and behavior agreed in all details with ours.—GERALD R. MACCARTHY, 107 Ledge Lane, Chapel Hill, N.C.

Tragedy Comes to Bluebirds in Lexington County

Mrs. P.B. Hendrix sent me a copy of her bird column in the Lexington, South Carolina, *Dispatch-News* for Thursday, June 1, 1967, in which she wrote as follows:

"For weeks there had been a constant call (from the farmers) for rain . . . Well, beginning early Sunday afternoon, May 21, the rains came . . . and by Tuesday noon, there was a grand total of slightly more than seven inches. And hereon hangs the reason for this column.

"About ten or twelve boxes were occupied by Bluebirds and nine of these had young in them. The week prior to the rain, five families of fledglings had successfully left their nests. As far as the observers here could study the number of young all about the place, there had been a good survival.

"But now for the sad story about fledglings too young to leave the houses. There were discovered on the morning of May 24, four nests with dead baby birds. In one case, a couple must have gotten out safely, but one was found on the ground beneath the house drowned and another inside the house had met the same fate. Then in two successive houses were found a total of nine birds dead. In one case they were almost old enough to fly. In another, they were five or six days old. The nests were soggy wet.

"One naturally concludes that the birds were drowned by the wind-driven heavy rainfall. However, there was a possibility that the sudden drop in temperature caused them to develop pneumonia. This is a constant threat to young birds and animals. It was a sad mission to have to bury so many young birds. The nests were removed and the houses thoroughly sprayed and the fronts of the boxes left off so the sun could dry the soaked boards within. Those who have bird boxes should check for just such a misfortune. There are discouraging experiences with wildlife just as there is with all forms of life. Now, one picks up the pieces and starts anew to help the birds with future families. Let us hope for better luck with the next round of nests."

Grimm's Bluebird Tales

William C. Grimm of Greenville, S.C., has reported the following interesting items about Eastern Bluebirds:

"We have had nesting Bluebirds in our back yard every spring since we put up a nesting box about ten years ago. This year a pair first appeared the first week in April and on April 7 the female was seen carrying nesting material. It was May 7, however, that we first saw the birds carrying food to the box, and we assume that they just hatched. All seemed to be going well until the 13th, when I noticed that the female was missing. All that day the male was exceedingly busy carrying food until late in the evening. On the morning of the 14th I watched in vain for the male but he, too, seemed to be nowhere around. About 10 AM, I put my ear to the box and could hear faint cries of young birds within. When the box was opened, it was found to contain five living young and a sixth one which was much smaller and had evidently been dead for some time.

"The five young birds seemed rather weak and at first I could not get them to take any food. After almost an hour I managed to get them to take bits of minced earthworm and before long they began begging for food. I called Jay Shuler and he suggested trying to feed them hard boiled egg; but, he added, he doubted that I would have any success in raising them. We decided to add bits of hamburger to the hard boiled egg, and all afternoon and evening the birds ate it avidly, setting up a clamor for food about every fifteen minutes. On the morning of May 15th they all seemed to be much stronger. The following morning their eyes opened.

"Neither my wife nor I could spare the time that rearing this family of five orphans demanded, so I called the Audubon Colony to see if any of the folks

there would like to try raising them. As a result they were adopted by Mr. and Mrs. William E. Cook. When my wife and I visited the Cooks the last week in May, they had four well fledged young Bluebirds in a cage. Several days before they had set them free, but they returned to their cage at evening. On the third day only four of the five had returned.

"On July 20, Mrs. Cook wrote to us about their further adventures with the birds. She said, 'The day after you visited us we released them. For four nights they returned to roost here and we recaptured them and put them in the cage for the night. After that they would have nothing to do with us, but stayed in the vicinity, coming back to eat the hamburger and egg. We still see the Bluebirds, two or three at a time, but they are quite wild and fly if they catch a glimpse of us or hear us. But they do eat—I fill their little dish three or four times daily. I do hope they will return next spring and perhaps nest around here. This has been a most interesting experience for us.'

"For several weeks after the above episode we neither saw nor heard Bluebirds in our immediate vicinity. But on the morning of June 6, my wife called my attention to three young birds sitting along the fence. They were baby Bluebirds and they were attended by both parents. The very next day we saw the female carrying nesting material into the box from which the orphans had been taken, and on July 1 we noticed that they were carrying food to the new brood of young.

"I had read in Bent's *Life Histories* that the young Bluebirds of the first brood were known to assist with the rearing of the second brood, but I had never observed such behavior during the ten years of observing the Bluebirds which nested in our back yard. Often I had seen the male drive the young from the vicinity of the new nesting. But this family stuck together and all three of the young assisted their parents in feeding the new brood which left the nest box on the morning of July 18. The whole family is still in the vicinity and the older young are still assisting with the feeding of their younger brothers and sisters!"

Bird Catches Cat!

Mrs. E.W. Henderson of Columbia caused much laughter at the High Hampton meeting with her story of the titmouse and the cat. We thought the rest of our Backyard Birders would enjoy hearing the same tale. Mrs. Henderson wrote:

"On April 30, our dog chased a large black and white cat up a tree. The cat climbed a tall pine and settled on the first limb, which was about 40 feet up. We shut the dog in his pen and tried to persuade the cat to come down, to no avail. Later that morning I looked up and saw a bird flying around the cat! I got my binoculars for a better look. It was a titmouse. The bird lit on the cat's back and worked its way up and down, plucking out hair, not the outer hair but the soft pelage hair. The cat rolled its eyes and tentatively lifted a paw. But the perch was too precarious and it settled back down. The bird even clung on to the cat's rump and plucked hair from the dangling tail!

"Meanwhile, the titmouse's mate sat nearby and watched. When the twittering bird had a big ball of fluff in its bill it flew happily away to line its nest. That night the cat managed to get down. I don't believe it'll ever come to this yard again!"

Peckerwood Apartments in the Henderson yard is none other than a tall dead pine with many holes of various sizes. In these have lived families of the Red-headed and Red-bellied Woodpeckers, Yellow-shafted Flickers and last, but not least, the Screech Owls. A play-by-play account of the activities of the owl family follows:

"I discovered a pair of Screech Owls in the back yard in the Peckerwood Apartments the week before Easter, March 26. For several weeks one would

(Continued on page 81)

CONSERVATION

MARIE B. MELLINGER, *Department Editor*

Feathers on a Conservation Breeze

It is gratifying to notice an ever increasing interest in conservation, and in the preservation of natural beauty and wild life. Almost every magazine and newspaper has at least one article or editorial about some phase of conservation. It is also gratifying that more and more conservation oriented organizations are being formed.

A state charter was recently granted to a South Carolina organization entitled *Keep South Carolina Beautiful, Inc.* The aim of the organization is "to sponsor efforts toward beautification of the state of South Carolina, and conservation of its natural and aesthetic resources."

The Georgia Conservancy continues to grow, and is increasing its membership every day. Their latest concern is a proposed plan to put the Chattooga River under the inviolate river act, keeping it entirely free from power dams or commercialism.

Alabama is in the process of forming an Alabama Conservancy, patterned on that of Georgia and Pennsylvania.

One thinks of stream pollution as coming from industry, and while this is a major problem, we also have a pollution problem created by people who cannot seem to resist the impulse to toss that can or bottle or paper plate into the nearest lake or stream. This is especially evident in some of our state parks, where crystal clear mountain streams are being clogged by garbage and debris. How can anyone be so messy?

An article in the Savannah *Morning News* speaks of "wreckreation," by vandals and litterbugs. Their actions cost over five million dollars annually in the National Forests alone. The *Good Outdoor Manners Association* says that this problem must be the concern of every individual who wishes to continue to see natural beauty in any part of our country.

In the *Anderson Independent*, Jo Ann Wiginton reminds us that "it is the Lord's land, entrusted to our care during our lifetime. An awesome land, magnificent in the variety and richness with which God endowed it." A thought we might all remember.

When Henry David Thoreau wrote *In the Maine Woods*, he spoke of people who were "tree haters." It seems we still have some of these around, for city planners in Baltimore found that a good many citizens did not want trees on their city streets. Why? It seems trees attract birds, and they did not want birds, either. I think this all goes back to the extreme necessity for conservation education at an early age. Imagine this country with a whole generation of "tree haters."

On the plus side of the conservation picture, we find the Department of the Interior advocating a system of wilderness trails, and also asking Congress to appropriate money to save the alligator and stop poaching. *Life* magazine came out with a strong plea for a stringent anti-billboard law, and Governor Maddox of Georgia advocates planting pines on all the roadside berms. Of course,

(Continued on page 81)

SPRING BIRD COUNT—1967	COAST			COASTAL PLAIN					PIEDMONT										
	Morehead City, N.C. 29 April	Wilmington, N.C. 29 April	Charleston, S.C. 29 April	Beaufort Co., N.C. 7 May	Pamlico Co., N.C. 6 May	New Bern, N.C. 29 April	Rocky Mount, N.C. 28 May	Fayetteville, N.C. 8 May	Henderson, N.C. 6 May	Raleigh, N.C. 22 April	Chapel Hill, N.C. 30 April	Greensboro, N.C. 29 April	Winston-Salem, N.C. 30 April	Stanly Co., N.C. 29 April	Davidson, N.C. 9 May	Charlotte, N.C. 6 May	Kings Mtn., N.C. 6 May	Greenville, S.C. 29 April	Anderson Co., S.C. 29 April
Individual Totals	123	1	—	—	—	*	—	—	—	1	—	—	—	—	—	—	—	—	—
Common Loon	123	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Red-throated Loon	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Horned Grebe	4	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pied-billed Grebe	24	2	6	—	—	2	—	1	—	4	—	1	—	3	—	—	—	1	—
Brown Pelican	84	2	80	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Gannet	13	7	6	—	—	9	—	*	—	—	—	—	—	—	—	—	—	—	—
Double-cr. Cormorant	164	48	12	47	39	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Anhinga	30	1	29	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Great Blue Heron	66	13	13	29	3	2	2	1	1	3	*	1	5	9	—	6	2	—	—
Green Heron	107	8	14	29	—	—	3	7	—	1	10	6	1	—	—	—	—	—	—
Little Blue Heron	146	105	6	33	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—
Cattle Egret	335	198	35	83	3	2	9	5	—	—	—	—	—	—	—	—	—	—	—
Common Egret	495	413	22	45	2	1	7	—	—	—	—	—	—	—	—	—	—	—	—
Snowy Egret	115	64	12	37	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Louisiana Heron	221	153	2	66	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Black-cr. Night Heron	37	22	1	11	—	—	—	—	—	2	*	1	2	—	—	—	—	—	—
Yellow-cr. Night Heron	28	1	2	22	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—
Least Bittern	9	2	7	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—
American Bittern	6	1	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Glossy Ibis	55	41	8	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
White Ibis	68	—	1	67	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Whistling Swan	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Canada Goose	87	—	—	—	—	—	2	—	—	36	—	—	34	6	—	9	—	—	—
Mallard	126	3	—	—	—	—	2	13	—	—	—	24	50	24	—	2	—	—	—
Black Duck	18	6	—	—	—	—	4	—	—	4	—	4	*	—	—	—	—	—	—
Gadwall	3	—	2	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—
Pintail	3	—	—	—	—	—	—	—	—	3	—	—	—	—	—	—	—	—	—
Blue-winged Teal	50	9	4	16	—	—	—	—	—	6	1	7	—	—	—	2	—	—	5
American Widgeon	3	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	2
Shoveler	4	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Wood Duck	80	1	8	17	—	2	3	5	2	5	6	15	4	3	—	7	—	—	2
Redhead	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Ring-necked Duck	24	2	1	1	1	19	2	2	2
Greater Scaup	28	6	1	1	1	8	2	17	1
Lesser Scaup	28	1	2	1	1	3	1	1	1
Scaup (sp. ?)	3	1	2	1	1	3	1	1	1
Bufflehead	3	1	2	1	1	3	1	1	1
Harlequin Duck	1	1	1	1	1	1	1	1	1
White-winged Scoter	2	2	1	1	1	1	1	1	1
Surf Scoter	5	5	1	1	1	1	1	1	1
Common Scoter	11	11	1	1	1	6	1	1	1
Ruddy Duck	9	1	1	1	1	1	1	1	1
Red-breasted Merganser	74	45	21	5	2	1	10	12	1
Turkey Vulture	101	*	4	22	2	1	6	12	2
Black Vulture	75	33	1	28	1	3	10	1	1
Sharp-shinned Hawk	3	3	1	1	1	1	1	1	1
Cooper's Hawk	6	3	1	1	1	1	1	1	1
Red-tailed Hawk	37	1	1	2	1	1	3	2	1
Red-shouldered Hawk	33	1	1	14	1	2	3	2	1
Broad-winged Hawk	13	5	1	3	1	1	2	2	1
Bald Eagle	5	1	1	3	1	1	2	1	1
Marsh Hawk	3	3	1	1	1	1	1	1	1
Osprey	50	2	15	5	4	1	2	1	1
Sparrow Hawk	26	2	4	4	4	1	9	7	1
Bobwhite	113	20	111	48	37	27	121	146	1
Turkey	3	3	2	5	41	65	79	92	18
King Rail	6	1	1	1	1	1	1	1	1
Clapper Rail	63	18	12	33	1	1	2	1	1
Virginia Rail	2	1	1	1	1	1	1	1	1
Sora	14	2	9	1	1	1	3	1	1
Purple Gallinule	1	1	1	1	1	1	1	1	1
Common Gallinule	17	3	14	1	1	1	1	1	1
American Coot	249	10	152	6	6	61	6	2	3
American Oystercatcher	92	12	20	60	1	1	2	6	3
Sandpiper	878	62	715	100	1	1	1	1	1
Sandpiper	89	22	67	100	1	1	1	1	1
Wilson's Plover	125	*	5	5	10	7	22	2	3
Killdeer	125	*	5	5	10	7	22	2	3
Black-bellied Plover	204	57	87	55	3	2	5	10	2
Ruddy Turnstone	23	10	8	5	1	1	3	5	1
American Woodcock	13	3	4	8	1	1	16	2	1
Common Snipe	157	25	22	110	1	1	1	1	1
Whimbrel	157	25	22	110	1	1	1	1	1
Upland Plover	*	2	14	19	13	13	8	11	5
Spotted Sandpiper	125	2	14	19	13	13	8	11	5
Solitary Sandpiper	89	1	1	1	1	1	4	5	7
Willet	275	64	140	71	1	1	4	11	39

SPRING BIRD
COUNT—1967

SPRING BIRD COUNT—1967	COAST			COASTAL PLAIN				PIEDMONT											
	Morehead City, N.C. 29 April	Wilmington, N.C. 29 April	Charleston, S.C. 29 April	Beaufort Co., N.C. 7 May	Pamlico Co., N.C. 6 May	New Bern, N.C. 29 April	Rocky Mount, N.C. 28 May	Fayetteville, N.C. 8 May	Henderson, N.C. 6 May	Raleigh, N.C. 22 April	Chapel Hill, N.C. 30 April	Greensboro, N.C. 29 April	Winston-Salem, N.C. 30 April	Stanly Co., N.C. 29 April	Davidson, N.C. 9 May	Charlotte, N.C. 6 May	Kings Mtn., N.C. 6 May	Greenville, S.C. 29 April	Anderson Co., S.C. 29 April
Individual Totals	22	48	9			1				1			6			1			*
Greater Yellowlegs																			
Lesser Yellowlegs	69	13	6			2	1	3				10	9		1	2			
Knot	1	*	1																
Purple Sandpiper	3															2			
Pectoral Sandpiper	17	3								4									
Least Sandpiper								1											
Dunlin	34	28	4													1			
Short-billed Dowitcher	855	84	303																
Long-billed Dowitcher	165	39	126																
Dowitcher (sp. ?)	2	2																	
	200		200																
Stilt Sandpiper		1																	
Semipalmated Sandpiper	1												*						
Western Sandpiper	23	13	9																
Sanderling	3		3				3												
Black-necked Stilt	84	66	15																
	12		12																
Great Black-backed Gull						6													*
Herring Gull	9	2				1								6					*
Ring-billed Gull	1270	700	23			275								90					
Laughing Gull	1338	300	32			1		1		2		15							
Bonaparte's Gull	484	32				51													
	1226	800	135			2				7									
	72	19																	
Gull-billed Tern																			
Forster's Tern	57	22	9			1													
Common Tern	18		15																
Least Tern	81	76	3																
Royal Tern	302	158	25			1													
Sandwich Tern	238	55	7			2	11	26											
	4																		
Caspian Tern																			
Black Skimmer	17	5	3							8		1							
Rock Dove	198	134	64																
Mourning Dove	960	25	21			4	60	37		350	*	106	180	20	20	84	3	8	42
Yellow-billed Cuckoo	2537	34	426			42	134	195		334	293	265	223	70	65	96	17	16	240
Black-billed Cuckoo	44	1	1			1	1	1		1	3	2	1	2	2	2	1		
	3		27																

[illegible]

SPRING BIRD
COUNT—1967

[illegible]

Parula Warbler	448	18	78	158	6	9	51	2	16	6	36	7	29	3	4	8	10	4	4
Yellow Warbler	136	1	11	6			15		14	3	9	12	30	20	3	5	13	1	4
Magnolia Warbler	11								12		4		1	2	2				
Cape May Warbler	29								1				5	12	1	2			
Black-th. Blue Warbler	60		2	2	1				14	2	6	10		8	3	1	6		
Myrtle Warbler	1770	56	54	124	1	8	118	2	38	47	349	294	252	264	42	35	32	2	18
Black-th. Green Warbler	30	1		16							1	1	10	1					34
Cerulean Warbler	3													2					1
Blackburnian Warbler	11													1	2				
Yellow-throated Warbler	241	6	24	96	3	9	22	1	2	1	16	27	6	13	8		4	3	5
Chestnut-sided Warbler	19								6		4		4		5				
Bay-breasted Warbler	2		2						28	2	2				2				
Blackpoll Warbler	63					1		2	2	2	2				2	14	6	2	2
Pine Warbler	307	3	9	77	6	4	8	1	9	12	47	37	28	13	20		12	18	3
Prairie Warbler	381	79	28	27	10	15	20	1	12	6	27	87	10	2	16	16	7	6	3
Palm Warbler	11	1	1								7	1	1				*		
Ovenbird	169		2	2	2			2	8	12	30	35	42	21			3	6	4
Northern Waterthrush	10			1					2	1	2	3	2	1					
Louisiana Waterthrush	54		1						2	1	16	11	4	1	10	2	5		1
Kentucky Warbler	49		4	4						4	3	9	8	3	3	4	6	1	
Connecticut Warbler	1		1																
Mourning Warbler	*																		
Yellowthroat	425	9	30	26	13	23	14	3	56	6	48	34	55	30	11	28	15	6	1
Yellow-breasted Chat	264	4	12	42	4	9	3	1	10	9	11	42	40	17	14	3	16	3	6
Hooded Warbler	164	1	15	21	2	4	6	3	3	6	25	23	18	8	3	8	5	7	
Canada Warbler	7								*		2		1	3	*		1		
American Redstart	248						4		25	18	32	53	95	2	5		7		3
House Sparrow	5672	145	171	5	265	258	111	480	345	44	767	150	1012	452	742	30	396	29	32
Bobolink	183	4	35	2					*	60	60		50		*				12
Eastern Meadowlark	1958	37	35	45	4	15	66	52	85	34	273	136	344	180	118	43	119	35	18
Red-winged Blackbird	3994	85	407	410	12	121	365	122	94	13	635	191	489	211	160	37	126	12	4
Orchard Oriole	265	24	72	44	3	16	12	3	8	7	14	5	12	4	12	4	14	2	1
Baltimore Oriole	43	1		1					5		13	1	8	*	3	1		1	8
Rusty Blackbird	165	6	2	30	1		13	2	20	2			1	62	20	6	2		

SPRING BIRD COUNT—1967	COAST			COASTAL PLAIN					PIEDMONT										
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Individual Totals																			
Purple Finch	41	---	---	---	---	3	---	---	---	19	13	6	*	---	---	---	---	---	*
Pine Siskin	15	---	---	---	---	---	---	---	29	223	113	331	12	155	15	62	3	---	---
American Goldfinch	1219	32	7	---	---	12	5	23	---	2	---	---	---	---	---	---	---	---	---
Red Crossbill	2	---	---	---	---	---	---	---	15	329	124	226	153	35	28	128	30	12	86
Rufous-sided Towhee	1577	48	109	61	14	67	19	77	---	---	---	---	---	---	---	---	---	---	---
Savannah Sparrow	526	26	243	23	7	6	33	13	3	121	14	13	9	4	4	1	---	---	11
Grasshopper Sparrow	58	---	---	---	---	---	---	---	---	13	---	25	2	4	---	---	---	---	13
Henslow's Sparrow	9	9	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sharp-tailed Sparrow	29	15	13	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Seaside Sparrow	46	23	18	5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Vesper Sparrow	4	---	---	---	---	---	---	---	---	4	---	---	---	---	---	---	---	---	---
Bachman's Sparrow	17	---	---	---	---	---	---	---	---	2	---	4	---	---	---	---	---	---	---
Slate-colored Junco	43	3	7	4	---	---	---	---	---	33	2	2	*	---	---	---	---	---	*
Tree Sparrow	1	---	---	---	---	---	2	---	---	---	---	---	---	1	---	---	---	---	---
Chipping Sparrow	959	2	11	23	11	5	26	9	16	226	129	154	76	76	17	43	33	31	54
Field Sparrow	674	---	16	2	1	6	13	6	1	148	74	115	41	87	23	49	25	12	39
White-crowned Sparrow	14	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
White-throated Sparrow	2030	17	253	73	16	2	76	35	7	554	217	304	249	120	6	14	8	38	41
Fox Sparrow	1	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	---
Lincoln's Sparrow	*	---	---	---	---	---	---	---	---	---	*	---	---	---	---	---	---	---	---
Swamp Sparrow	143	1	6	9	---	3	13	2	3	41	22	27	11	1	2	2	---	---	---
Song Sparrow	158	7	3	5	---	---	2	---	---	31	2	40	27	4	14	3	8	2	10
TOTAL NUMBER SPECIES	245	142	166	164	71	78	110	90	84	153	110	145	130	119	79	111	87	63	100
TOTAL NUMBER INDIVIDUALS	87639	6268	7994	6111	1126	1299	4795	2274	3664	1123	11721	13074	6669	4873	1472	3847	1080	559	3958

* Seen in count area during count period but not on count day. (Not included in totals.)

SPRING BIRD COUNT—1967

ELOISE F. POTTER

The present Spring Bird Count compares very favorably with the record-breaking census of 1965. In that year 81,795 birds of 246 species (not including Rock Doves) were tallied by 315 observers in 109 parties at 24 locations, and observers traveled about 3,000 party-miles in 977 party-hours. This year 87,639 birds of 245 species (including Rock Doves) were counted by 299 observers in 114 parties, and observers traveled about 4,000 party-miles in 1009 party-hours. Wilmington led in species found (166), closely followed by Charleston (164), Raleigh (153), Greensboro (145), and Morehead City (142). The earliest count was made on 22 April at Raleigh, the latest on 28 May at Rocky Mount, with the majority (10) falling on the last weekend in April.

Among the unusual sightings were a Harlequin Duck and three Purple Sandpipers lingering at Morehead City, two Whistling Swans at Rocky Mount, a Connecticut Warbler at Wilmington, and two Red Crossbills at Raleigh. These and other interesting records are mentioned in the local summary paragraphs.

The most exciting observation of the spring count, however, pertains to breeding birds rather than migrants. In Stanly County observers searching for Barn Swallows discovered a colony of nesting Cliff Swallows beneath the High Rock Bridge on Tuckertown Lake. This colony lies between known nesting sites at Hartwell Dam on the Georgia-South Carolina border (Tedards, *Chat*, 29: 95-97) and Kerr Reservoir on the North Carolina-Virginia line (Sykes and Quay, *Audubon Field Notes*, 20:560-561). Several compilers commented on an apparent increase in breeding Barn Swallows in piedmont North Carolina. Certainly bird students throughout the Carolinas should be on the alert for possible further extensions of breeding range by both Barn and Cliff Swallows in the next several years.

Anderson County, S.C. (all points within a 15-mile diameter circle centered at Anderson Airport as in previous years).—29 April; 4:30 AM to 7:30 PM. Clear; temp. 40 F to 75 F; wind SW, 0-10 mph. Fourteen observers in 6 parties. Total party-hours, 50 (14 by car, 36 on foot); total party-miles, 352 (322 by car, 50 on foot). **Total species, 100; total individuals, 3,958.** To sum up in a few words: Transients were few; warblers and vireos were not singing; most winter residents had left; residents were too busy with nesting affairs to come out and be counted. The good numbers of Rough-winged, Barn, and Cliff Swallows were apparently nesters attracted by Lake Hartwell.—J.D. Copeland, Phillip Darst, Ruth and Gaston Gage, Roland Geiger, Judith Hines, Pat Peterson, Deidre Spencer, Pam and Howard Spencer, Adair and Connor Tedards (compilers), Douglas Tedards, Caroline Watson.

Beaufort County, N.C. (all points within a 15-mile diameter circle centered where Upper Goose Creek enters Pamlico River in central Beaufort County).—7 May; 7:00 AM to 5:30 PM. Rain in morning, cloudy and very windy all afternoon; temp. 66 F to 80 F; wind SW, 0-25 mph. Two observers in 1 party. Total party-hours, 10 (8 by car, 2 on foot); total party-miles, 84 (80 by car, 4 on foot). **Total species, 71; total individuals, 1,126.**—Geraldine Cox (compiler), Marvin Turnage.

Chapel Hill, N.C. (all points within a 15-mile diameter circle centered at intersection of Columbia and Franklin Streets).—30 April; 5 AM to 6 PM. Partly cloudy; temp. 45 F to 80 F; wind light. Thirty-five observers in 14 parties, plus 5 individuals working own yards. Total party-hours, 74 (17 by car, 57 on foot); total party-miles, 182 (128 by car, 54 on foot). **Total species, 110; total individuals, 5,732.** Bewick's Wren (WBS) was observed at close range in low shrubs

along a brook. Bird showed prominent white eye stripe, white throat and breast. plain brown back without streaks.—David Barnes, Dale and Alma Beers, Charles and Helen Blake, Louise Crumpacker, Bill and Dan Dye, Jean Feldman, John Filley, Bob and Florence Geist, Claude George, Francis and Jean Harper, Alexander Hull, Logan and Elinor Irvin, Stella Lyons, Gerald MacCarthy, Helmut Mueller, Thomas and Mary Odum, Hans Oelke, Wallace Patterson, Johnnie Payne, James Pullman, Phillips Russell, Wiley B. Sanders, Robert and Mildred Sharpe, Jean Stewart, Wilma Stuart, Robert and Elizabeth Teulings (compilers), Matt and Sue Thompson, Adelaide Walters, Fred and Josephine Weedon.

Charleston, S.C. (all points within a 15-mile diameter circle centered 14 miles NE of Mt. Pleasant and $\frac{1}{2}$ mile E of Hwy 17).—29 April; 6 AM to 5 PM. Sunny; temp. 45 F to 75 F; wind NW to SW, 5-10 mph. Fifteen observers in 6 parties. Total party-hours, 52.5 (14.5 by car, 1 by boat, 32 on foot, 5 on bicycle); total party-miles, 194 (141 by car, 5 by boat, 37 on foot, 11 on bicycle). **Total species, 164; total individuals, 6,111.** Uncommon are **Blue-winged Warblers** (JHD, RVC) and **Rose-breasted Grosbeak** (ELB, RB), studied at close range. All three Bald Eagles were adult birds.—Roy Baker, T.A. Beckett III, Edwin L. Blitch, Mrs. Jack Button, E.B. Chamberlain (compiler), Norman Chamberlain, Robert V. Clem, E.C. Clyde, Mrs. R.H. Coleman, E.R. Cuthbert Jr., J.H. Dick, Tim Gwynette, Julian Harrison, Capt. and Mrs. L.S. Smith, David Yount.

Charlotte, N.C. (all points within a 15-mile diameter circle centered at intersection of Hwy 21 and Woodlawn Avenue to include a small part of York County, S.C.).—6 May; 5 AM to 7 PM. Cloudy; temp. 50 F to 70 F; wind NNE, 0-12 mph. Twenty-three observers in 9 parties. Total party-hours, 55.25 (13.25 by car, 42 on foot); total party-miles, 370 (339 by car, 31 on foot). **Total species, 111; total individuals, 3,847.** The **Dunlin** and **Pectoral Sandpiper** (Mrs. WGC) were seen in the York County, S.C., part of the count area. The former is apparently the third reported sight record for inland South Carolina (*Chat*, 27:47; 30:19). It was studied carefully through 30X Balscope at a distance of about 150 feet. The White-crowned Sparrow (JPH et al.) is a rare visitor in Mecklenburg County. The overcast weather kept the hawks down, and the absence of the Ruby-throated Hummingbird was almost unbelievable.—Mrs. M.J. Barber, Jimmy Bookout, Lorna Byers, Ann Elizabeth Cobey, Dr. and Mrs. W.G. Cobey, Mr. and Mrs. A.H. Dykema, Mr. and Mrs. J.P. Hamilton, Anna B. Jewell, Irene Kittinger, Mrs. T.L. Millwee, Joseph R. Norwood (compiler), Mrs. Joseph R. Norwood, Mrs. George Potter, Douglas Pratt, Mark Simpson Jr., Bill Smith, Joan Templeton, Vaud Travis, Ruth L. Whyte, David B. Wright (Mecklenburg Audubon Club and guests).

Davidson, N.C. (all points within a 15-mile diameter circle centered at junction of Route 73 and East Rocky River Road 1 mile SE of Davidson).—9 May; 12:30 to 6:00 PM and 9:00 to 10:00 PM. Warm, clear, windy. One observer. Total party-hours, 6.5 (3.5 by car, 3 on foot); total party-miles, 85 (80 by car, 5 on foot). **Total species, 80; total individuals, 1,472.** The large concentration of swallows represents a very conservative count. This huge flock was present for several days and all species were readily identified while resting on power lines. For details of Mourning Warbler sighting, see General Field Notes in this issue. Marcus B. Simpson.

Fayetteville, N.C. (all points within a 15-mile diameter circle centered where Hwy 87 joins 301-A in southern Fayetteville).—8 May; 6 AM to 9 PM. Partly cloudy with light showers during middle part of day; temp. 50 F to 68 F; wind calm. Fourteen observers in 7 parties, 6 individuals working own yards. Total party-hours, 90 (60 by car, 30 on foot); total party-miles, 275 (246 by car, 29 on foot). **Total species, 108; total individuals, 3,664.** **Black-billed Cuckoo** is unusual for the area. The number of Catbirds (120) was unusually large. Rufous-

sided Towhees were both white-eyed and red-eyed.—John S. Butler Jr., Derb Carter (compiler), Ruth Chesnutt, Joan Courtney, Frances Currie, Margaret Haigh, Doris Hauser, Catsie Huske, Gertrude Huske, Gladys Kyle, Howard Kyle, Buford Law, Ashton Lilly, Frances Rankin, Henry Rankin, Evelyn Rhodes, Winship Shaw, Betty Whiddon, Byron Williams.

Greensboro, N.C. (all points within a 15-mile diameter circle centered at WBIG Radio Station, 3001 Battleground Road).—29 April; 5:00 AM to 6:30 PM. Partly cloudy; temp. 54 F to 61 F; wind gusty. Thirty-six observers in 11 parties, 2 individuals working own yards. Total party-hours, 105 (25 by car, 80 on foot); total party-miles, 504 (450 by car, 54 on foot). **Total species, 145; total individuals, 13,074.**—Donald F. Allen, Rose K. Avery, Mrs. John F. Benson, David Burney, John W. Carr, Mrs. David Cason, Ellene Y. Cobb, Inez Coldwell, Mrs. Floyd Hugh Craft, Larry Crawford, G.W. Daniels, Mrs. G.W. Daniels, Charlotte Dawley, Jean F. Gertz, Howard C. Groover, Sidney Holmes, Mrs. Clarence Knight, Robert L. Lasley, Mrs. Robert E. McCoy, Lena Marshburn, James Mattocks, Ida Mitchell, Elizabeth Ogburn, Mrs. David Parsons, Penelope Parsons, Annie Laurie Perdue, Mrs. George W. Perrett, Mrs. W.D. Seawell, Ruth Sikes, George A. Smith (compiler), Mrs. W.F. Smyre, Thomas E. Street, Mrs. C.R. Surratt, Mrs. Ralph H. Weisner, Mrs. V.J. Wyckoff, Helen J. Zuk.

Greenville, S.C. (all points within a 15-mile diameter circle centered at intersection of Hwy 291 and 29).—29 April; 7:30 AM to 6:30 PM. Partly cloudy; temp. 38 F to 68 F; wind 5 mph. Six observers in 3 parties. Total party-hours, 11 (3 by car, 8 on foot); total party-miles, 60 (56 by car, 4 on foot). **Total species, 63; total individuals, 559.**—Lillie Hart, Rosa Lee Hart (compiler), Mrs. W.B. Lawrence, W.B. Lawrence, May Puett, Stacey Shirley.

Henderson, Vance County, N.C. (all points within a 15-mile diameter circle centered in Henderson).—6 May; 7:00 AM to 4:45 PM. Overcast in morning with light cloudiness in afternoon; temp. 54 F to 73 F; wind SW, 6 mph. One party of 10 individuals. Total party-hours, 9.75. Total party miles, 56 (46 by car, 10 on foot). **Total species, 84; total individuals, 1,113.**—Neita Allen, Mr. and Mrs. A.W. Bachman (compiler), Miss Sarah Boyd, Annie G. Burroughs, Mary F. Chavasse, Mrs. Walter Dallas, May Hunter, Garnette Myers, Paul A. Stewart (Oxford), Mrs. Russell Parham.

Kings Mountain, N.C. (all points within a 15-mile diameter circle centered at Bethlehem Baptist Church).—6 May; 5 AM to 8 PM. Cloudy, cool; temp. 45 F to 70 F; wind moderate. Seventeen observers in 9 parties. Total party-hours, 33 (8 by car, 15.75 on foot, 9.25 home grounds); total party-miles, 144 (128 by car, 16 on foot). **Total species, 87; total individuals, 1,080.**—Mr. and Mrs. Glenn Dover, Gussie Huffstetler, R.S. Lennon, Mrs. R.S. Lennon (co-compiler), Mrs. R.E. McCoy (co-compiler), Mr. and Mrs. J.L. McLaurin, Mrs. Henry Neisler, David and Hayne Neisler, Mrs. W.P. Powell, Mrs. J.B. Simpson, Mrs. F.R. Summers, Mr. and Mrs. Joe Thompson, Joe Woodward.

Morehead City, N.C. (all points within a 15-mile diameter circle centered at Crab Point Intersection).—29 April; 3:00 AM to 6:30 PM. Clear, mild; temp. 44 F to 76 F; wind variable, 10-15 mph. Ten observers in 5 parties. Total party-hours, 45.5 (22.5 by car, 1 by boat, 22 on foot); total party-miles, 278 (250 by car, 2 by boat, 26 on foot). **Total species, 142; total individuals, 6,268.** Adult male **Harlequin Duck** in full breeding plumage was seen at Fort Macon by all who took part in the count. The late **Purple Sandpipers** were also at Fort Macon. **Stilt Sandpiper** (JT, TW) was found at North River Marsh.—John O. Fussell II, John O. Fussell III (compiler), R.J. Hader, Will Hon, F.L. Johns, Harry Kordasiewicz, T.L. Quay, Paul Sykes, John Thompson, Tom Wade.

New Bern, N.C. (all points within a 15-mile diameter circle centered at airport to include Neuse River from mouth of Broad Creek to Streets Ferry, New Bern, Trent River to Hardison Farm).—29 April; 5:30 AM to 6:30 PM. Clear; temp. 35 F to 69 F; wind NW, 4-12 mph. Ten observers in 4 parties. Total party-hours, 45 (6 by car, 39 on foot); total party-miles, 88 (70 by car, 18 on foot). **Total species, 110; total individuals, 4,795.** The **Warbling Vireo**, representing a new species for this area, was observed for some time and carefully identified by sight and call by MC and GC.—Margaret Baxter, Catherine Blaylock, Joel Clark, Fred Conderman, Margaret Conderman, Geraldine Cox, Robert P. Holmes (compiler), J. Alex Meadows, Sue Meadows, Sam Sweeny.

Pamlico County, N.C. (all points within a 15-mile diameter circle centered in Florence at the intersection of roads 1324 and 1329).—6 May; 6 AM to 8 PM. Partly cloudy; temp. 53 F to 84 F; wind SW, 0-5 mph. Three observers in 1 party. Total party-hours, 13 (10 by car, 3 on foot); total party-miles, 75 (72 by car, 3 on foot). **Total species, 78; total individuals, 1,299.**—Jeff Cowell, Geraldine Cox (compiler), Ronnie Hill.

Raleigh, N.C. (all points within a 15-mile diameter circle centered at State Capitol, same area as previous counts).—22 April; 5 AM to 7 PM. Light rain in early morning and more rain in early afternoon; temp. 62 F to 72 F; wind S, 4-5 mph. Forty-two observers in 12 parties. Total party-hours, 145 (37.5 by car, 107.5 on foot); total party-miles, 266 (212 by car, 54 on foot). **Total species, 153; total individuals, 11,721.** **Red Crossbill** (GT, Mrs. WH) seen at Lake Johnson.—David Bradshaw, Mrs. F.H. Brant, Mrs. Charles Bryan, Charles I. Bryan, W.J. Buffalo, Mrs. David M. Cates, Mrs. J.W. Chalfant, John Coffey Jr., Danny Coffey, Ann Davis, Mrs. Lloyd H. Davis, Mrs. L.E. Dillard, Mrs. J.W. Duffield, Steve Fretwell, R.J. Hader, Mrs. William Hatheway, Mrs. Samuel Holshour, Ester Ivey, Mabel Jones, Mrs. W.E. Kelly, Mrs. C.M. Kistler, John Lamson, Mrs. John Lamson, Edmund LeGrand, Harry LeGrand Jr., Dale Lewis, Richard Link, Stephen Maddock, F.B. Meacham, Edna Miller, Mabel Miller, Darryl Moffett, Mrs. F.W. Nagle, John Rhodes, Mrs. John Rhodes, Mary Showalter, Mrs. A.J. Skaale, Mrs. J.W. Stone, Gwenn Turbiville, Mrs. D.L. Wray, D.L. Wray (compiler).

Rocky Mount, N.C. (all points within a 15-mile diameter circle centered at Battleboro).—28 May; 4:30 AM to 8:00 PM. Fair to partly cloudy; temp. 68 F to 93 F; wind calm. Six observers in 2 parties, 2 individuals working own yards. Total party-hours, 30 (23 by car, 7 on foot); total party-miles, 224 (201 by car, 23 on foot). **Total species, 90; total individuals, 2,274.** **Myrtle Warblers** are here rather late. Also I was surprised to see **Sanderlings** this far inland (JT).—Joyce Bennett, Steve Howell, Carr Speight, Sarah Speight, John Thompson (compiler), Mary Louise Warner.

Stanly County, N.C. (all points within a 15-mile diameter circle centered about 2 miles NW of Badin).—29 April; 5:00 AM to 6:30 PM. Fair; temp. 35 F to 73 F; wind SW, 5-7 mph. Fifteen observers in 6 parties, 18 individuals working own yards. Total party-hours, 75 (14 by car, 6 by boat, 55 on foot); total party-miles, 162 (124 by car, 10 by boat, 28 on foot). **Total species, 119; total individuals, 4,873.** **Barn Swallows** are increasing. **Cliff Swallows** were found with nests built or under construction under High Rock bridge on Tuckertown Lake (BC, JW). **Bewick's Wren** and **Tree Sparrow** (RB) were in the lowlands of Morrow Mountain State Park.—Ervin Blalock, Roy Blalock, Margaret Crawley, George Culp, Myrtle Culp, Barrett Crook, Vera Crook (co-compiler), Francis Eudy, Nina Eudy, Joey Ferrebee, Joey Foglia, Mattie Gerig, Rudy Gerig, Cleary Haithcock, Nancy Hanks, Lectie Harwood, Louise Hammill, Mickey Isenhour, Myrtle Isenhour, Vera Littleton, Barbara Mauney, Annie

(Continued on page 82)

General Field Notes

THOMAS L. QUAY, *Department Editor*
Department of Zoology, North Carolina State University, Raleigh, N.C.

Red-necked Grebe at Fayetteville, N.C.—On the afternoon of 22 March 1967, while checking an unusually large number of ducks on Forest Lake, Fayetteville, N.C., I saw a large grebe which appeared to be a Red-necked Grebe (*Podiceps grisegena*). The bird was feeding with an adult male American Widgeon and two Pied-billed Grebes when sighted and remained with them during the period of observation.

The grebe was observed through 8x40 binoculars at a distance of about 40 feet for approximately 30 minutes in good light; nearly all field marks were noted. It could at once be distinguished from the Pied-billed Grebes by its superior size. Although the bird was in changing plumage, enough red could be seen on the bird's neck to put me on the right track. Also noted was the sharp contrast between the white throat and dark neck. Body color was a dark brown, becoming lighter at the waterline. The bird was not flushed and the white wing patches were not seen. Several dives of the Red-necked Grebe were compared with those of the Pied-billed and were found to be greater in length. Other birds on the lake included Ring-necked Ducks, Mallards, scaup, Ruddy Ducks, the widgeon, more Pied-billed Grebes, and several American Coots.

The Red-necked Grebe is a scarce winter visitor along the coast and casual inland. A Red-necked Grebe was seen on the same lake by the author and several others in winter plumage, 28 February through 4 March 1963 (*Chat*, 27:34). The Christmas Count of 1966 listed eight Red-necked Grebes in the Carolinas (*Chat*, 31:16).—DERB CARTER, 417 DeVane Street, Fayetteville, N.C., 14 August 1967.

Cattle Egrets Eating Earthworms.—At 12:00 noon, 22 May 1967, Joe Jones of Chapel Hill telephoned me from the University of North Carolina's Finley Golf Course to say that he was watching two birds on the fairway that he suspected were Cattle Egrets. He did not have a binocular at the time and the birds were too far away to make identification positive without a glass. I drove to the course and saw two Cattle Egrets in full breeding plumage feeding over the short grass during a light steady rain. Temperature was 53 F at the time. Although I watched them through an 8x40 binocular for sometime, they were too far away for me to determine what they were eating.

I left the golf course to visit the nearby University farm and on my return about 15 minutes later, I saw the two egrets within 10 feet of the road. They moved away as I stopped the car near them to watch. Both birds stood eying me suspiciously for about 30 seconds before they resumed their feeding. They were only about 40 feet away and were not alarmed because I remained quietly inside the car.

One of the egrets walked across the grass, stopped, and reached down to pick up a long earthworm which it swallowed in two or three gulps. The second, and farther one, leaned forward and struck downward swiftly with its bill. Then it slowly pulled an earthworm from its burrow. It, too, swallowed the worm with a few jerks of its neck and head. I noted that the egrets did not wriggle the neck in the snaky motion characteristic of them when feeding on grasshoppers and frogs. I also noted that when they lowered their heads in readiness for a strike, with the bill held at an angle of about 45° with the ground, the lovely, buffy head plumes, which were wet from the rain, fell forward, giving them the crested look of a Harpy Eagle.

Apparently, many earthworms of the golf course had been forced out of their burrows, or at least part way out of them, by the heavy rainfall of the previous few days. The Cattle Egrets seemed to be feeding on earthworms exclusively, at least while I had them under close observation.

From 17 to 27 May 1954, John J. Elliott, at a turkey farm in East Moriches, Long Island, New York, watched Cattle Egrets feed each day on earthworms which they picked up from the open range. Elliott was a well-known field ornithologist of the New York City area who died in June 1963.—JOHN K. TERRES, *P.O. Box 571, Chapel Hill, N.C., 23 May 1967.*

Bald Eagles at Santee-Cooper Reservoir.—Between 1955 and 1965 I worked as a fish biologist on the Santee-Cooper Reservoir in the coastal plain of South Carolina. I was able to make casual observations of Bald Eagles throughout most of this period because the eagles both nested and wintered near my home at Pinopolis, which is located on a peninsula jutting into Lake Moultrie. An active nest was located only 200 yards from my home up until 1959 when someone killed one of the adult birds at the nest site. I observed one other dead eagle during the 10-year period which had been killed by a hunter and left in the marsh.

The southwest dike on Lake Moultrie was a preferred loafing and feeding area for the eagles. The prevailing winds typically washed dead or moribund fish against the dike which were eaten by the eagles or Turkey Vultures. If the wind was strong enough, the vultures and eagles would hover over the dike waiting for the dead fish to be washed against the rip-rap. At such times one would have to look closely to distinguish an immature eagle from a vulture. The most eagles that I observed in close association at one time was five, including two adults and three immatures.

I also occasionally observed Bald Eagles on Lake Marion, the upper lake of the Santee-Cooper Reservoir, on Cooper River below the reservoir, and on the Francis Marion National Forest.

The most interesting thing which I observed happened one day as I was driving on top of the previously mentioned west dike. I happened to look out of the window of the car on the land side of the dike and saw a pair of eagles joined together by beaks and claws tumbling from a height of about 100 yards in the sky. Just before crashing to the ground, they separated and flew off in opposite directions. I felt that I had witnessed some sort of mating behavior.—ROBERT E. STEVENS, *Department of Zoology, North Carolina State University, Raleigh, N.C., 1 March 1967.*

Peregrine Falcons at Santee-Cooper Reservoir.—While duck hunting in South Carolina in 1965, I observed a Peregrine Falcon on three separate dates. Each time I saw the duck hawk, or hawks, I was duck hunting on Lake Moultrie which, along with Lake Marion, makes up the Santee-Cooper Reservoir. The specific area is known as the "hatchery" and is a diked area of about 4 square miles on the southwest shore of Lake Moultrie.

On 20 November, while wading in the typically shallow waters of the hatchery, I flushed a pair of Mallards about 100 yards in front of me and seemingly within a split second afterward, a Peregrine passed over my head, rolled over on its back and struck the hen Mallard a glancing but ineffective blow. The pair of ducks then reversed their direction and passed over my head with the Peregrine continuing to harass the female duck. Contact was lost when all three birds flared in response to my presence and flew off in different directions.

On 25 November while I was hunting in a 3-acre pond located in the middle of the hatchery, a flock of about a dozen Green-winged Teal flew over the pond with a Peregrine Falcon in close pursuit. The hawk overtook the flock with ease and made a strike at one individual teal. Before the strike was effected, however, the teal literally fell out of the air to the surface of the pond

and quickly disappeared into a clump of vegetation. I could not see whether the teal went under the surface of the water or not, but the hawk lost interest in the teal once it had left the air. For the next hour or so, several hunters were engaged in shooting and wading about in the pond, but I saw no trace of the teal until about 90 minutes after the attack when the teal flushed out of the pond and flew away apparently unharmed.

Again on 30 November at the same pond, I observed a Peregrine Falcon more or less lazily cruising the area—a great contrast to the breath-taking speed which was displayed in the two attacks upon the ducks. I never have seen any bird, fish, or animal move at speeds even approaching that attained by the falcon in the two attacks on the ducks and these were made in straight and level flights—not by a stoop from above.—ROBERT E. STEVENS, *Department of Zoology, North Carolina State University, Raleigh, N.C., 11 March 1967.*

Gulls Riding Thermals, Possibly in Migration.—On 10 April 1966 while vacationing at Ocean Isle Beach, N.C., I observed several large groups of gulls behaving very much like migrating hawks. These gulls (most were Herring Gulls) left the salt flats about 10:00 AM, flew to the beach and immediately started to rise on the thermals which were forming. The birds continued to rise until they were barely visible through glasses. They then started to glide north. I noted four or five groups (several hundred birds in all) behaving in a similar way, and I assume that these birds were returning north on a migratory route. I have observed hawks migrating in this manner several times, and the gulls behaved identically to the hawks.—GARDNER GIDLEY, *Woodbourne Road, Clemmons, N.C., 9 January 1967.*

Thick-billed Murre at Wrightsville Beach.—On 9 December 1966, we first observed a fairly large, black and white water bird, at the southern end of Bank's Channel (Wrightsville Beach, N.C.) near Masonboro Inlet, which was ultimately identified as a Thick-billed Murre (*Uria lomvia*). For several days preceding 9 December there had been northeast winds of near gale force, but late in the afternoon the wind had calmed and a heavy fog moved in from the sea. On 10, 11, and 12 December the bird was observed in the same area late in the afternoons. Just before dusk on 12 December, the bird was seen to fly over the beach toward the ocean and disappear. As the bird arose from the water the feet appeared to be spraddled and later trailed beyond the body. Flight was just high enough to clear the rooftops. The bird was not seen again until the morning of 18 December, when there was a northeast wind. About 1:30 PM, Mr. and Mrs. Cecil Appleberry arrived with a spotting scope with 15x and 20x wide-angle lenses and a 30x lens. At this time the bird was just inside Masonboro Inlet. During approximately 45 minutes of observation the bird did very little diving, mainly preening and resting on the water. With the aid of the spotting scope, the white pattern could be distinguished along the sides of the neck and ending just below the eye. There was no black line on the white cheek as in the Common Murre (*U. aalge*).—FRANCES NEEDHAM, *Box 81, Wilmington, N.C., 23 January 1967.*

Fish Crows Gathering Before Going to Roost.—In the fall of 1961, a roost of Fish Crows (*Corvus ossifragus*) was found at Langley, Aiken County, S.C., and described in detail in an article in the *Chat* (25:91). About 3,000 Fish Crows used the roost, arriving from the west in one long flock. Since the crows foraged in flocks of no more than 200 birds, it was assumed that they had a preliminary gathering place before moving together to roost.

On 1 September 1962, I found the gathering place which the crows and many herons used before flying to roost. It was 5 miles west of the roost on Horse Creek, the same creek on which the roost was located. The gathering place was ½ mile from the junction of the Savannah River and Horse Creek. It was an area of hayfield and corn bordered by cut-over swamp. The Fish

Crows arrived in groups of 50 to 350 birds from the south and southwest. They came in at about 375 feet, and then dove or "scaled" down into the swamp, where they sat in dead trees or watered in open spots. Large flocks flew from the swamp into the fields. There was a constant din of croaking and cawing. The birds became more restless as their numbers increased, and their calling increased correspondingly.

This was the last point of congregation before they flew to roost, but there could have been earlier gathering points farther south in the Savannah River swamp. On 2 September, the crows began arriving at the gathering area at 5:48 PM. They started flying to roost at 6:26 (sunset at 6:52). Little Blue Herons and Common Egrets had the same flight lines and gathering place as the crows, although they did not fly with the crows. In 1965, the roosting area was destroyed by a road.

Little information has been written on the roosting of Fish Crows. That they use preliminary gathering points corresponds to the behavior of the Common Crow (*C. brachyrhynchos*) in the northern part of its range.—WILLIAM POST JR., Aiken, S.C., 30 December 1966.

A Case of Mate-changing by Nesting Bluebirds.—For the past 10 years Eastern Bluebirds have nested in a box in our yard. This past spring I first noticed a pair carrying nesting material into the box usually occupied. A few days later, however, a pair of House Sparrows had taken possession. The bluebirds subsequently took over another nesting box about 50 feet away, from which I had recently removed a House Sparrow nest containing four eggs. On 14 May the bluebirds were carrying food to their young, which evidently had just hatched.

On the morning of 29 May both nesting bluebirds were flying about excitedly, calling and waving their wings as if in courtship. They repeatedly flew to the other nesting box which was now empty. Several times the female entered this box while the male remained nearby. I thought that this behavior was unusual as the pair had been feeding the young birds for two weeks and the nestlings should be ready to try their wings.

It was in the afternoon that I discovered the cause of the excitement that morning. A second female had appeared and indeed was courting the male. Twice during the afternoon, I saw the first female come to the box with food and attempt to feed her young. Both times she was driven away by the interloper. The male bird continued to feed the young and on most trips the second female accompanied him. As he fed the young she sat on top of the box or nearby, waving her wings and calling, and often flying to meet him as he returned with food. At no time did she offer to feed the young. Several times she went to the empty box and performed courtship activities there.

On the morning of 30 April, the second female was on hand very early; either following the male on trips for food or greeting him excitedly when he returned to feed the young birds. Once again this morning the mother of the young came to the box with food and the second female drove her away. That was the last time I saw her attempt to bring food to her young, and she apparently left the vicinity. Later in the morning the activity of the second female decreased; she remained nearby but no longer followed the male or greeted him with calling and wing-waving when he brought food to the young.

On the afternoon of 31 May, the first young bird left the box. Three others ventured out on the morning of 1 June. The second female apparently accompanied the male and young after they left the nest box, but she showed no interest whatever in feeding them. Several times she was seen about the yet-unused box, then on 11 June she and the original male both appeared at this box and she began to carry nesting material into it. The young apparently hatched on or about 3 July, on which date the parents were first observed carrying food to the box. The young birds left the house on the morning of 19 July.—WILLIAM C. GRIMM, 15 Strawberry Drive, Greenville, S.C., 31 October 1966.

Anting by Prothonotary Warbler.—On a trip to Rocky River in Anderson County, S.C., 22 May 1965, I observed a male Prothonotary Warbler (*Prothonotaria citrea*) picking ants off a vine, which was growing up a river birch, and placing them in his plumage. He was thus engaged for about 45 seconds.

A search of the literature reveals no previous record of anting for this species and only one record for the family *Parulidae*. Eleanor E. Dater observed a Blue-winged Warbler (*Vermivora pinus*) anting in New Jersey on 10 August 1951 (*Auk*, 70:89).—ADAIR M. TEDARDS, 207 Brown Road, Anderson, S.C., 26 May 1965.

Evidence of Nesting of the Swainson's Warbler in Sumter County, S.C.—On 24 June 1967 we were exploring a portion of the extensive swampland bordering the upper Wateree River in extreme northwestern Sumter County, S.C., when we heard the song of a Swainson's Warbler (*Limnothlypis swainsonii*) in a canebrake approximately 100 feet from the edge of the river. Having observed the species on several occasions in the Toxaway region of the Blue Ridge Mountains, Simpson recognized the song as being that of the Swainson's Warbler. Subsequent observation with binoculars revealed all critical field marks distinguishing this bird from the Worm-eating Warbler (*Helmitheros vermivorus*) and the Louisiana Waterthrush (*Seiurus motacilla*). We were able to observe the bird for about one minute, during which time it foraged about in the dead leaves covering the forest floor and finally flew up into the dense portion of the cane thicket. After a 10-minute search, Simpson located what we believe to be the nest of this bird. It was located deep in a dense stand of cane (*Arundinaria gigantea*) at a height of 3 feet in a 5-foot high cane stalk. The structure and composition of the nest were similar to the descriptions given by Griscom and Sprunt (*The Warblers of America*, 1957, p. 54), Wayne (*Birds of South Carolina*, 1910, p. 150), and Sprunt and Chamberlain (*South Carolina Bird Life*, 1949, p. 436). During the examination of the nest, the bird moved about constantly, singing and calling frequently, and circling the spot several times at a distance of less than 10 feet. The nest appeared to be new but unused, suggesting the possibility of preparation for a second brood. On 4 July, Pratt returned to the site with Vaud Travis and Mr. and Mrs. Joseph Norwood; and the party found the bird still present and actively singing, although no search for the nest was made.

Aside from the Swainson's occurrence along the Savannah River, *South Carolina Bird Life* lists but one record from the fall-line region of the state, that being Quattlebaum's observation of four birds on 3 June 1932 in Lexington County. However, Brooke Meanley (*The Living Bird*, 5:151-165) states that this species has declined significantly along the coastal region since the turn of the century and that the majority of these birds now occur in suitable habitats along the fall-line region. With these observations in mind, observers should be alert for this species in the central portion of the state.—MARK SIMPSON JR., P.O. Box 167, Statesville, N.C., AND DOUGLAS PRATT, Route 3, Box 113L, Charlotte, N.C., 10 July 1967.

A Mourning Warbler in Piedmont North Carolina.—On the afternoon of 8 May 1967, I was working a large tract of wooded swampland along the Rocky River floodplain just north of rural route 1449 in western Cabarrus County, N.C. At approximately 6:30 P.M., I was attempting to locate the nest of a pair of Prothonotary Warblers when an adult male Mourning Warbler (*Oporornis philadelphia*) lit on the limb of a dead tree about 30 feet from where I was standing. I was able to study the bird through 7x binoculars in excellent light for about one minute before it flew into the dense leaf canopy overhead. I was able to observe clearly all the critical field marks: the yellow breast and underparts, the grey hood, and the distinct black bib and lack of an eye ring which distinguish it from the Connecticut Warbler. The bird was uniform olive above and con-

formed to the color plate and description in Peterson's eastern *Field Guide*. The bird sang several times while I was observing it, and it continued to sing for some time after disappearing into the foliage. Upon returning to my room, I listened carefully to the album of North American warbler songs published by the Federation of Ontario Naturalists; and I was able to confirm the song as belonging to the Mourning Warbler.

Birds of North Carolina states that the Mourning Warbler is "known only as an autumn migrant," listing one record from late July and eight records from late August, September, and October. *Chat* (30:111) lists two additional records from August and September 1966. To my knowledge, there are only two published accounts of spring occurrences of this warbler in the Carolinas. *South Carolina Bird Life* lists this species as a "casual spring transient in the mountain region," but the only specific record is that of Cannon's observation of an adult male on 24 and 25 May 1940 at Spartanburg, S.C. *Chat* (25:34) records an adult male Mourning Warbler observed by James C. Taylor on 16 May 1960 in Graham County, N.C. However, E.E. Brown of Davidson College informs me (personal communication) that he observed this species during spring migration at Salisbury, N.C., nearly 20 years ago.—MARK SIMPSON JR., P.O. Box 923, Davidson College, Davidson, N.C., 23 May 1967.

Report of American Goldfinches at Hartsville, S.C.—The south end of Eighth Street in Hartsville, S.C., goes into Washington Street which runs east and west. There are two fields, one on the east and another on the west of Eighth Street, bordered on the south sides by Washington Street. In years past these fields have been planted in soybeans, but for the past year they have been untilled and weeds allowed to grow to maturity.

The predominant crop of annuals is pigweed (*Amaranthus retroflexus*). Each plant produces literally thousands of small seeds which could attract feeding birds. Other plant growth consists of such weeds as: cocklebur, chickweed, vetch, cranesbill, wild mustard, sedge, and Bermuda grass.

On 11 February 1967, after two days of snow, at 2:30 PM, I noticed a flock of about 50 American Goldfinches (*Spinus tristis*) on the stalks of pigweed in the east field. Observing these fields four times a day, six days a week, I noticed that more and more goldfinches were coming in and feeding every day. By the 16th, flocks were seen coming from the east field onto telephone wires and crossing Eighth Street and flying into the west field. I counted over 300 as they landed on the wires. As I walked over the fields, hundreds more flew up in flocks and settled down again to feed. There were as many as 5 to 11 lined up on some of the stalks of pigweed. Not a yellow one was seen; they were all brownish-olive or very greenish-yellow. They were easy to spot in the field because of their light greyish-white breasts and bellies against the dark weeds; much lighter than the Song, Vesper, Field, and House Sparrows seen in the fields. There was a constant chattering and twittering coming from all parts of the fields, which made a subdued kind of melody when the flocks were feeding. Many times I stopped and listened and knew that they were present, although I could not see them when they were on the ground because of the weed growth.

On 21 February 1967, the temperature was in the low 50s and the wind was strong. The goldfinches were all over the two fields. Five hundred were in the east field in three flocks, with larger flocks in the west field which I estimated as 700 to 800 (about 1,300 in all). As I walked through the fields, the birds circled, undulated, reversed flight as a body, and then settled back down to feed. They kept 15 to 25 feet ahead of me, settling back behind and all around until I felt as though I could reach out and touch them. Over twice as many had come in since the week before.

Up until 6 March these large flocks were observed every day, sometimes in the mornings until 10:00 AM and afternoons until 3:00 PM. By then they were

reduced in numbers with only about 100 observed. On 13 March 1967, I brought Mrs. P.A. King to see my "goldfinch fields." We could find only about 300 that morning. On the 14th of March, I walked the fields to see how many were still around. About 300 were in the east field, and back in a far corner were about 100 more. Across the road in the west field was a flock of about 200 individuals.

By 20 March 1967, the big flocks had returned. They were all over the two fields in flocks of 100 to 300, probably 800 to 1,000 in all and maybe hundreds more feeding on the ground in the weeds. In a group feeding in the east field, I found two golden ones with black caps. These were the first males seen in spring plumage.

March 22nd was cloudy and freezing when I came by at 9:30 AM. Again there were the great numbers all over the fields and in addition there was a flock of a hundred or more Chipping Sparrows adding their high little voices to those of the goldfinches.

From 2:30 to 3:00 PM on 24 March, which was sunny and very warm, I did not find them in the fields, but two blocks north on Eighth Street there were hundreds all up and down telephone wires, covering two pecan trees and four chinaberry trees, while others were on the shrubbery and ground in a vacant lot. They looked like miniature Cedar Waxwings. Several people were watching them when I dove up, and wanted to know what they were. We estimated 1,500 to 2,000.

Very few were seen for four more days, usually a dozen or two with 50 at the most. On four trips every day on 29-31 March and 1 April 1967, not a one was seen. On 24 March, were they gathering the flocks together to migrate northward?—WILLIE M. MORRISON, 1610 Home Ave., Hartsville, S.C., 2 April 1967.

Further Observations of the White-crowned Sparrow at Spartanburg, S.C.—Due to a change in the habitat, open fields growing up and a rapid growth of small pines planted a few years ago, the total number of White-crowned Sparrows (*Zonotrichia leucophrys*) is gradually decreasing in our immediate area, and for 1967 only 15 new birds have been banded. However, a number of the banded birds of the past few years continue to return, and this year 12 of these were retrapped. (See *Chat*, 28:98-100 and 29:89, for earlier reports.)

It is interesting to note that of the 12 retraps, 11 were banded in 1964, and 5 of these in the spring as adults. This would indicate an age of at least 4½ years for the 5 adult birds. Also, 9.2% of the original flock of 97 birds banded in 1963-1964 are represented in this group. Only one of the 12 birds had been recaptured previously since being banded.

The first fall return was on 19 October 1966, and the last White-crowned Sparrow seen this spring was on 11 May 1967.—JOHN WATKINS, *Montgomery Drive, Spartanburg, S.C., 16 May 1967.*

BRIEFS FOR THE FILES

Compiled by JAMES F. PARNELL
Department of Biology, Wilmington College, Wilmington, N.C.
(All dates 1967)

Common Loon, a single bird was found freshly killed near Charleston, S.C., on 28 May by Ted Beckett, while one was seen at Wrightsville Beach, N.C., on 3 June by Dorothy Earle.

Horned Grebe, a bird just beginning to attain the breeding plumage was found on a small pond near Chapel Hill, N.C., on the late date of 18 June, Robert and Elizabeth Teulings.

Cattle Egret, spring observations continue to increase inland. This spring 20

were seen in a pasture between Augusta, Ga., and Aiken, S.C., on 21 May, with 15 seen near Aiken State Park on 28 May, Tom M. Rial. One was seen on 9 April and 12 to 15 between 6 and 15 May at Raleigh, N.C., Robert Hader. At Chapel Hill 1 was seen on 13 May by J.O. Pullman, and 2 were seen on 22 May by J.P. Holmes. Both were reported to R. Teulings.

Little Blue Heron, 2 in breeding plumage were seen near Raleigh from 6 to 15 May by Robert Hader, while 1 was seen on 26 May at Chapel Hill by Robert Teulings.

Glossy Ibis, 1 was seen near Raleigh on 13 May by Robert Hader. Several were reported to have wintered in the Charleston area, Ted Beckett.

White Ibis, several wintered in the Charleston area, Ted Beckett.

Ring-necked Duck, 2 were rather late at Raleigh on 17 May, Lee Jones.

Ruddy Duck, 1 was late at Raleigh on 14 May, Robert Hader.

Harlequin Duck, a male in full breeding plumage was seen off the jetty at Ft. Macon on 30 April by P.W. Sykes, T.L. Quay, R.J. Hader, and F.L. Johns. The bird had been observed for several days prior by John Fussell III.

Fulvous Tree Duck, 16 were present from 12 to 16 March at Magnolia Gardens, Charleston, S.C., Ted Beckett.

Hooded Merganser, 2 young birds about 5 weeks old seen, with 1 banded, at Magnolia Gardens on 20 May, Ted Beckett.

Swallow-tailed Kite, a single kite was observed at close range on 24 April near Ora in Laurens County, S.C., by John P. Hardister, while near Beaufort N.C., a kite was seen on 29 April by Eugene Pond.

Purple Gallinule, 3 pairs nested this spring in the ponds at Magnolia Gardens, Ted Beckett.

Purple Sandpiper, 2 seen on the late date of 30 April on the jetty at Ft. Macon by Paul Sykes, T.L. Quay, R.J. Hader, F.L. Johns, and J. Fussell.

Laughing Gull, numbers reported to be increasing on Deveau Banks near Charleston where 450 pairs were estimated on 28 May by Ted Beckett.

Ground Dove, 1 seen between Carolina Beach and Ft. Fisher on 28 June, J.F. Parnell.

Barn Owl, a pair nesting in a barn near Elkin, N.C., have reared at least two broods since discovered in December of 1965, reported to E.M. Hodel by Jim Uldrick.

Swainson's Thrush, 1 was early at Chapel Hill on 10 April, Robert Teulings.

Prothonotary Warbler, 1 was found early on 11 March at Magnolia Gardens by Ted Beckett.

Myrtle Warbler, 1 was late at Chapel Hill on 1 June, reported to Robert Teulings by Mrs. F.R. Weedon.

Black-throated Green Warbler, 1 was early at Charlotte, N.C., on 25 March, Lee Jones.

Cerulean Warbler, a single bird was seen at Raleigh on 6 May by Robert Hader.

Chestnut-sided Warbler, individuals seen daily from 8 to 14 May at Fayetteville, N.C., by Derb Carter.

Wilson's Warbler, several sightings of this usually scarce spring migrant were made in the piedmont of North Carolina and coastal plain of South Carolina. One was seen on 25 March at Magnolia Gardens by Ted Beckett and Edwin Blitch; 1 was seen on 11 May at North Wilkesboro by Wendell Smith; 1 was found on 6 May at Raleigh by Paul Sykes; and one was banded on 13 May at Chapel Hill by Robert Teulings.

Brown-headed Cowbird, noted to be increasing during spring and early summer at Magnolia Gardens, Ted Beckett, and at Wilmington, James Parnell.

Scarlet Tanager, several females were banded at Magnolia Gardens this spring by Ted Beckett. A single male was seen at Wrightsville Beach during the first week of May by James Parnell, and 4 were found near the Cape Lookout Coast Guard Station on 28 April by Eugene Pond.

Indigo Bunting, Ted Beckett reports unusually large concentrations of these birds at Magnolia Gardens between 15 March and the end of April.

Dickcissel, 3 were found at Wrightsville Beach on 15 March by Mary Urich, and individuals were seen by Edwin Blitch in the vicinity of Charleston on 15 March and 9 April.

Henslow's Sparrow, 1 was seen near Elkin, N.C., on 16 April by E.M. Hodel, and a single bird was found on 8 May at North Wilkesboro by Wendell Smith.

Lincoln's Sparrow, individuals were banded at Chapel Hill on 23 April and 13 May by Robert and Elizabeth Teulings.

BACKYARD BIRDING

(Continued from page 60)

sit looking out of a hole in the tree. Then during the week of May 5 there was a grey one in the hole; on May 18 I saw two grey ones in the same hole. I sat under the tree in my camouflage clothes. Both parents flew back and forth to the nest several times. They discovered me. One clacked his bill at me and made whining noises. All of a sudden he dived—at me. I left. He followed me halfway to the house. On the night of the 20th I sat in the car. I saw one grey one leave the nest; he rocked back and forth before lighting out. He flew to the oak by the cars. Then the other baby flew from the bushes to the trunk of the same oak. He made his way partly up the tree, then flew down to the clump of honeysuckle. I saw the cat stalking him. I grabbed her and took her into the house. I went back outside with the camera and took two snapshots. I went back to get an Instamatic slide but the baby owl was gone. The parent was sitting on a low limb but left before I could film him.”

CONSERVATION

(Continued from page 61)

eventually these are to be cut to support the highways, but at least they would be prettier than billboards while they are allowed to flourish.

Ivory-billed Woodpeckers Found in Texas

Ivory-billed Woodpeckers have been discovered in the Big Thicket country of eastern Texas, Secretary of the Interior Stewart L. Udall announced 27 August. Persistent sightings were traced down in that region by ornithologist John V. Dennis, working under contract for the Bureau of Sport Fisheries and Wildlife, and field verification of several pairs was made in the Neches River valley. Reports of Ivory-bill survival will be investigated in South Carolina along the Congaree River, in Florida along the Apalachicola River, in Alabama and Mississippi along the Tombigbee River, and in Georgia along the Altamaha River. Searching for Ivory-bills and other rare and endangered species in Florida will be CBC member Paul Sykes, who recently completed graduate studies in the Department of Zoology at North Carolina State University and is now a biologist with USF&WS.

Protected by Federal law under the Migratory Bird Treaty Act among this country, Mexico, and Canada, the Ivory-bill has been a victim of environmental changes. It has been confused with the Pileated Woodpecker so often that birdwatchers began to despair, but the present sightings have been well confirmed, the Secretary said. Plans for Ivory-bill protection include agreements with timberland owners to protect trees needed by the woodpeckers, plus “the best protection of all, an alerted public,” the Secretary said.

SPRING BIRD COUNT—1967

(Continued from page 72)

Misenheimer, Harold Morris, Helen Mount, Anne Olsen, Sue Trott Parker, Spencer Plyler, Francis Russell, Addie Thompson, John Whitlock, Vivian Whitlock (co-compiler), Bennie Winget.

Wilmington, N.C. (all points within a 15-mile diameter circle centered at Myrtle Grove Junction).—29 April; 5 AM to 6 PM. Clear; temp. 43 F to 73 F; wind NW, 0-13 mph. Sixteen observers in 6 parties. Total party-hours, 67 (24 by car, 43 on foot); total party-miles, 247 (196 by car, 51 on foot). **Total species, 166; total individuals, 7,994.** Unusual records were the **Anhinga (EA)**, **Bald Eagle (PM)**, **Long-billed Dowitcher (EP)**, **Cliff Swallow (JFP, EA, DL)**, **Connecticut Warbler (CA)**, and **Scarlet Tanager (JP)**.—Katharine Alexander, Cecil Appleberry, Edna Appleberry, Derb Carter, Geneva Dyches, Dot Earle (compiler), Paul Grooms, Harry Latimer, Dale Lewis, Billy McEachern, Polly Mebane, Frances Needham, James F. Parnell, Eloise Potter, Jack Potter, Mary Ulrich.

Winston-Salem, N.C. (all points within a 15-mile diameter circle centered at intersection of I-40 and Silas Creek Pkwy).—30 April; 5:30 AM to 8:30 PM. Cloudy, some sunshine in afternoon; temp. 55 F to 74 F; wind S, 0-10 mph. Twenty-four observers in 10 parties, 4 individuals working own yards. Total party-hours, 93 (8 by car, 85 on foot); total party-miles, 298 (252 by car, 46 on foot). **Total species, 130; total individuals, 6,669.** Swainson's Warbler (CBC, YC) was singing male watched in good light at a distance of 50 feet. Canada Geese included two downy young hatched by wild pair. **Warbling Vireos (MV, GG)** were noted first by song, then watched carefully at distance of 75 feet.—Carolyn B. Cowherd, Yelverton Cowherd Jr., Janice Czikowsky, Charles Frost, Gardner Gidley, Gary Gidley, Margaret Gidley, Fred Hill, Page Hill, Ruth Hill, Royce Hough (compiler), Wayne Irvin, Alice Landreth, Paul Landreth, Dwight Lee, Pollyanna Lee, Barbara Page, Mary Parker, Ramona Snavelly, Becky Spinks, Edie Spinks, John Spinks, Myron Vourax, Robert Witherington.

BOOK REVIEWS

BIRDS OF MEXICO. Emmet Reid Blake. Chicago, University of Chicago Press, 1953. 644 p. illus. \$8.50.

First published some 15 years ago, Blake's *Birds of Mexico* remains today as the only available field guide to Mexico's vast avifauna. Blake describes in detail the plumages, subspecies, range, and ecology of 967 species and nearly 2,000 forms known to occur between the United States and Guatemala. Nearly 330 species are illustrated by pen-and-ink drawings accompanying the text, while two maps show the ecological and political structure of Mexico. Blake also includes a detailed species key at the beginning of each family list in order to aid in rapid identification of any bird seen in the field.

Unfortunately, *Birds of Mexico* has several drawbacks as a field guide. Although the illustrations are of high artistic quality, they rarely aid in the actual process of field identification except at a family level. Furthermore, the key system is relatively useless in the field, although it is marvelous for work with a specimen in hand. In a region with such a variety of birds, the use of color plates and the critical field-marks system would have greatly enhanced the value of the book. In addition, it would have been most beneficial if Blake had included

a brief discussion of the ecology and geography of Mexico in relation to its bird life.

Despite these problems, *Birds of Mexico* is an indispensable book for any field work south of the border, and it will undoubtedly remain the basic reference work for a long time to come.—MARK SIMPSON JR.

THE BIRDS OF CAPE COD, MASSACHUSETTS. Norman P. Hill. Introduction by Roger Tory Peterson. New York, William Morrow & Co., 1965. 364 p. \$6.00.

Had it not been for the efforts of Norman Hill, the untimely death of Ludlow Griscom in 1959 might well have prevented the completion of this long-awaited regional work. In anticipation of such a volume, Griscom had kept for nearly 20 years meticulous notes on the region. These notes, combined with extensive work by Dr. Hill and data from the Austin Ornithological Research Station on Cape Cod, provided the basis for the book. With its thoroughness and numerous innovations, *The Birds of Cape Cod, Massachusetts* surpasses most similar works and sets a new standard for regional lists.

Hill begins with a thorough description of the area, including the climate, vegetation, physiography, ocean currents, and the effects of man. This is followed by a fascinating and authoritative discussion of the ornithological history of the region, from the time of the Indians and Vikings down to the present date. The third chapter is an exhaustive survey of all sources of data for the list; it includes a discussion of all individuals, organizations, and museums which contributed information of any form. Perhaps the most significant portion of the book is the chapter entitled "Outline of treatment." In this section, Hill sets forth twelve clear and strictly defined terms to describe the authenticity or "goodness" of a given record. The most acceptable criterion is a collected specimen presently available for examination, while a recognizable photograph is the next best evidence. The value of records descends rapidly down to that of "unreliable." Hill introduces a new term in order to clarify the problem of sight records: the label "presumptive" is used for sightings which he accepts as fully valid, while the category of "hypothetical" is applied to observations which cannot be accepted with complete finality. Hill's discussion of each term and of the general problem of record validity is highly valuable reading for anyone planning to compile a regional work.

The systematic list contains 354 conclusive species and 30 hypotheticals, each of which is discussed with respect to its status at every season, the sources and validity of its records, and its past history in the region. Hill's discussion of the history of each bird is particularly informative in giving a picture of its changes and population trends through the years, especially when those trends can be tied to ecological changes. Following the species list, the chapter "Ornithological summary" presents a thorough discussion of the broader changes in the bird life of Cape Cod and particularly man's role in bringing about such alterations. The book also contains a thorough but hardly exhaustive bibliography.

With its clarity, breadth, and attention to detail, *The Birds of Cape Cod, Massachusetts* represents a laudable example of a regional fauna, an example which future workers would do well to study.—MARK SIMPSON JR.



Founded 6 March 1937

Incorporated 8 August 1949

Carolina Bird Club is an incorporated association for the study and conservation of wildlife, particularly birds, chiefly in the Carolinas. Founded in 1937 as the North Carolina Bird Club, it was joined in 1948 by several South Carolina natural history clubs and the name changed to the Carolina Bird Club.

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The Chat, as the official bulletin of Carolina Bird Club, Inc., is published quarterly in March, June, September and December. All members not in arrears for dues receive *The Chat*. Correspondence concerning memberships, changes of address and back numbers should be sent to CBC Headquarters, P.O. Box 1220, Tryon, N.C. 28782. Please notify Headquarters immediately of change of address.

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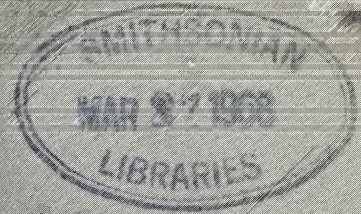
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OUR COVER—Glossy Ibis photographed by Jack Potter at Battery Island, Brunswick County, N.C. In this issue Gilbert S. Grant describes a new colony of waders in Onslow County, N.C.

NESTING SUCCESS OF DICKCISSELS BREEDING IN NORTH CAROLINA

STEVE FRETWELL

During the summer of 1964, three pairs of Dickcissels (*Spiza americana*) bred successfully near Raleigh, North Carolina. Recent breeding records for the Dickcissel in the East are rare, but some records may be noted. Simpson (1955) recorded Dickcissels breeding at Winston-Salem, N.C.; Cannon (1956) recorded the species breeding in South Carolina; and there are evidently permanent colonies in Maryland (Will Russell, personal communication). Extensive observations on these eastern breeding Dickcissels are lacking, however, and so the birds discovered in 1964 at Raleigh were followed closely. These notes are of general interest as an example of a bird nesting outside its presently normal range. They are of special interest since the Dickcissel, once a common breeding bird in the East, for unknown reasons, suddenly disappeared around 1880 (Cross, 1956; Rhoads, 1903).

METHODS

Twenty-eight visits were made to the nesting area in the course of eight weeks. In addition, the feeding of the young by adults was observed from a blind for nearly 10 hours.

RESULTS

Establishment of the colony.

The birds appeared to arrive in pairs or individually. They could easily be distinguished from one another by differences in plumage. The first male to arrive (Male 1) had a considerably larger throat-patch than the second (Male 2), and the latter had a larger throat-patch than the third male to arrive (Male 3). Female 1 had a yellow throat and breast, Female 2 a black throat, and Female 3 a buff throat. The dates of the first and last observations for each individual are given in Table 1.

Habitat type.

The birds nested in a 10-acre, overgrown pasture located on the edge of Lake Raleigh. The dominant plant species in this pasture were *Lespedeza* sp.

TABLE 1. *Dates individual Dickcissels first and last seen at Raleigh, N.C.*

	Male 1	Male 2	Male 3	Female 1	Female 2	Female 3
First seen	21 May	13 June	15 June	21 May	9 June	26 June
Last seen	17 July	8 July	28 June	15 July	8 July	28 June

TABLE 2. *Nestings of an Eastern colony of Dickcissels (1964).*

Nest No.	Pair Composition	Date Found	Clutch Size	Hatching Date	Brood Size	Fledging Date
1	M1, F1	1 June	4	9 June	3	16 June
2	M2, F2	25 June	4	1 July	4	8 July
3	M2, F1	10 July	3	destroyed on 15 July		

TABLE 3. *Early morning nestling feeding rates in an Eastern colony of breeding Dickcissels.*

Date	Age of Nestling	No. Hours Observed	Food Particles (per trip)	Feeding Trips/Hour (per nest) (per nestling)	
13 June	4 days	5	1.07	20.5	6.84
14 June	5 days	4	1.09	37.4	12.42
6 July	5 days	1	1.27	35.5	8.90

TABLE 4. *Food fed to nestlings in an Eastern colony of breeding Dickcissels.*

Date	No. Insects Observed	Soft Green Caterpillars (percent)	Grasshopper Nymphs (percent)	Moths (percent)	Unidentified (percent)
13 June	100	39	40	6	15
14 June	144	48	30	7	15
6 July	39	0	84	6	10

and *Festuca elatior*. Fields of this type are quite common in this area. An adjacent alfalfa field apparently was not used by the Dickcissels.

Nesting success.

Three nests were found, and the behavior of the females indicated that only three were attempted, at least in the study area. Some of the birds arrived so late in June that they could have attempted earlier nestings elsewhere. The nests were found in the early stages of incubation. Two of these nests were successful, while the third was blown over by strong winds. Eleven eggs were laid, of which 8 survived to hatching time. Of the 8 remaining, 7 hatched and 7 young survived to leave the nest. Dates are given in Table 2.

Food availability.

Three mornings were spent in a blind studying the food brought to the nest by the parents. Feeding data are given in Tables 3 and 4.

Social behavior.

The males showed two distinctive types of social behavior which may be called "vocal" and "quiescent." Vocal males sang steadily all day long. They actively pursued females and gave alarm in defense of their nests. Quiescent males were secretive, ignored or avoided females, and gave no alarm in defense of nests. Only one of the three males was vocal at any one time, except for the mornings following the arrival of each new male. On 13 June, the day that Male 2 was first seen, he and Male 1 were both singing vigorously. On 15 June, when Male 3 first appeared, he and Male 2 were both singing. Male 1 had become quiescent. In the days following, all three males were observed in the pasture, but only Male 2 was singing. Males 1 and 3 quietly fed in the territory of Male 2 and were ignored by him.

The females showed no intolerance either of each other or of the males. Non-nesting females occasionally followed males about. Nesting females seemed to ignore the males, except perhaps when the latter were giving alarm. The females were often seen preening, and would engage in this activity for several hours a day.

Female 1 started two nestings: numbers 1 and 3 in Table 2. Female 2 started nesting number 2. Female 3 apparently made no attempt to breed.

Female 1 was mated to Male 1 for the first nesting and to Male 2 for her second. In both cases, her mate disappeared from the study area soon after incubation had begun. Male 1 apparently left in the early morning and returned by noon for a couple of days. Then he was not seen in the study area at all until after there were young in the nest. Upon his return he attempted to court Female 1, which ignored him, and then he became quiescent. Female 2 was mated to Male 2 for her one nesting; he remained in the study area and was continually attentive to her and her nest. The female alone was observed incubating the eggs and feeding the young. Male 2, however, gave alarm when I went near the nest of Female 2. On one occasion, while I was setting up the blind by the nest of Female 2, she came to the nest. Male 2, giving high-pitched alarm notes, flew down at her and seemingly drove her away.

COMPARISONS WITH MIDWESTERN DICKCISSELS

In a two-week trip over the normal range of the species during mid-June 1965 (Fretwell and Calver, in prep.), we found Dickcissels in a wide variety of habitat types, including grain, hayfields, and pastures. The birds clearly preferred mixed clover fields, a habitat type not often found in the East. This habitat is structurally more dense and complex than the *Lespedeza-Festuca* pasture occupied by the North Carolina birds. The breeding distribution of the Dickcissel is not entirely explicable on the basis of these clover fields, however. In the Mississippi River Valley we found Dickcissels in large numbers in other habitat types—especially wheat fields and pastures. In central Ohio, on the other hand, many acres of apparently ideal mixed clover fields went unoccupied.

The Dickcissels in North Carolina were relatively successful in their three nesting attempts, fledging young from two of the three nests studied. The nest success of an Oklahoma population was 31% for 61 nests studied (Overmire, 1962). Moreover, there seemed to be no difficulty in finding food for the nestlings in the Raleigh area. Nice (1943, p. 235) points out that the number of feedings per hour per nestling for a variety of species "is much the same—slightly over or under four." She gives the record as 8.4. The female Dickcissels, working alone, fed each young bird about 9 times per hour. The food brought to the young was typical for the species (Pearson, 1917).

The comparisons suggest that, in the East, habitats are available in which the Dickcissel can successfully raise young. There is apparently more suitable breeding habitat available than the species presently occupies. It is not clear from this study why the habitats in the Midwest are occupied while those in the East are not. Factors affecting nesting success and food supply do not seem to be involved, but there is a need for data from other eastern Dickcissel colonies to verify this point.

SUMMARY

Three pairs of Dickcissels (*Spiza americana*) bred near Raleigh, North Carolina. Observations were made on habitat, nest success, feeding rates, food, and social behavior. Comparisons are made with midwestern birds. The habitat occupied in North Carolina was not that preferred in the Midwest; but the North Carolina birds successfully fledged two out of three sets of nestlings, fed the young typical food, and brought food at a high rate. These observations suggest that there is still suitable habitat in the East and that Dickcissels can successfully breed there.

ACKNOWLEDGMENTS

I gratefully acknowledge the help of Fred Johns, graduate student in zoology, for his help in collecting the data on food and feeding rates. Dr. Robert Hader made some field observations and generously allowed me to use his data. I wish also to thank William Standaert for his help and critique in the writing

of the manuscript. These observations were made while in the Biomathematics Training Program under support from PHS Grant GM 678, National Institute of General Medical Sciences.

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North Carolina State University, Raleigh, N.C.
8 March 1967

NEWS AND COMMENTS

Back Issues Requested

CBC Headquarters reports that extra copies of two recent issues of *Chat* are no longer available. These are the September 1966 and the March 1967 issues (Vol. 30, No. 3 and Vol. 31, No.1). Members having extra copies are requested to donate them to the club. Envelopes for mailing these magazines may be obtained by writing the Headquarters Secretary, Mrs. R.G. Paterson, P.O. Box 1220, Tryon, N.C. 28782.

New GOS President

Marie Mellinger, editor of our Conservation Department, is just beginning a two-year term as president of Georgia Ornithological Society. She states that she has accepted this challenging job primarily because of her interest in conservation. A dedicated and well-informed conservationist, Mrs. Mellinger will undoubtedly provide outstanding leadership for GOS.

North American Nest Record Card Program

As many readers are aware, the Nest Record Card Program is now completing its third year on a continent-wide basis. We appreciate the assistance of the hundreds of persons and bird clubs whose enthusiasm and patience make this program possible. If you are interested in helping in this research, please get in touch with the Laboratory of Ornithology at Cornell University for instructions and nest-record cards. Before the new nesting season begins, we urge all present contributors to return any completed cards. We also request that participating clubs and birders order additional cards, if necessary, well in advance of the 1968 nesting season.—(Mrs.) Edith Edgerton, Nest-record Card Program, Laboratory of Ornithology, 159 Sapsucker Woods Rd., Ithaca, N.Y. 14850

CONSERVATION

MARIE B. MELLINGER, *Department Editor*

The ending of an old year and the beginning of a new year is always a time for taking inventory, for noting the gains and losses, and making plans for the future. We can be happy to note the expanding interest in conservation activities, and the continuing work of interested individuals and organizations in the field of conservation. As editor of this department, I appreciate any comments or information sent to me, and hope that all of you will feel free to write whenever you have anything that should be brought to our attention.

In taking stock of the past year it is saddening to note that increasing costs of the war and other commitments are liable to cut the national budget for wilderness trails, wilderness areas, and beautification projects. It will be up to the individual states to do all in their financial power to offset these losses.

A bitter floor fight in the House of Representatives is pending on the curbing of billboards. It is doubtful if effective legislation will be passed to eliminate these eyesores.

There is continued littering of our highways, and pollution of our streams, both on a grand scale, by careless citizens, particularly those of the younger generation. We need much more conservation education, and more conservation minded youth groups.

To add to the long list of endangered species, authorities say that the butterfly population is down some 75% in the United States. Imagine a world without the bright gayety of butterflies, not to mention the job they do in cross-pollination of plants. Insecticides are blamed for this!

Sports writers in several leading southern newspapers continue to advocate the fun (?) of riding through the countryside and indiscriminately shooting hawks, owls, and crows.

Heavy poaching continues to deplete the alligator population. In an effort to offset this in Georgia, the legislature committee studying alligators in that state has advised that the hunting season on these reptiles be closed for six years.

On the plus side we must commend the Spartanburg TV Station, WSPA, for their continued plugs for conservation and anti-pollution practices.

North Carolina has added Great Horned Owls, Cooper's Hawks, and Sharp-shinned Hawks to the protected list. All hawks and owls are now protected in North Carolina. Now we need to educate the public to help save and protect these species.

In a move of cooperation between the Department of the Interior and the Department of Army, a joint agreement has been sent to Congress for approval for cooperation in regulating dredging, filling and alteration of estuaries.

Mr. Robert R. Reid Jr. of the Alabama Ornithological Society has written us that their group is vitally concerned with "river channelization" being done by the Soil Conservation Service and the Department of Agriculture. Changes in river channels result in much loss of bird habitat. It is a project that should be given further study.

We should thank the *Anderson Independent* for the full page spread on Rare and Endangered Species that appeared on 16 October 1967.

The Wild and Scenic Rivers bill, including the Chatooga, passed the Senate unanimously. It will come before the House sometime in 1968.

The Georgia Ornithological Society has formed a conservation committee, with Mrs. R.E. Hamilton of Dalton as chairman. It is comprised of interested conservationists from Georgia and corresponding members from neighboring states. R. Connor Tedards represents the Carolina Bird Club on this committee. Its purpose, to cooperate with conservation minded organizations, and to work for protection of endangered species, and to save good birding habitat.

There has been a concerted call for help by nine Georgia organizations, under the leadership of the National Wilderness Society to keep the Okefenokee Swamp as an inviolate wilderness.

Mr. M. Latham has been named water conservationist of the year for South Carolina. There is a continued and increasing need for good water conservation and anti-pollution practices.

The Georgia Conservancy has purchased Panola Mountain, to preserve a rock outcrop with unique endemic flora, for a study area and sanctuary.

NEW AND TIMELY—

The Third Wave—Conservation Yearbook (beautifully illustrated) by the Department of the Interior, \$2.00 from the Supt. of Documents, Govt. Printing Office, Washington, D.C. 20402.

The Trees and the Forests—a conservation-minded bulletin available from St. Regis Paper Company, 150 E. 42nd St., New York, New York 10016.

A Critical Index of Films and Filmstrips in Conservation—\$1.00 from Audio-Visual Center, the Conservation Foundation, 30 E. 40th St., New York, N.Y. 10016.

The Green-winged Teal, Its Distribution, Migration, and Population Dynamics—available on request from Migratory Bird Populations Station, Laurel, Maryland 20810.

TRANSMOUNTAIN ROAD—NO!

It is most reassuring to report that Secretary of the Interior, Stewart L. Udall, has definitely disapproved the transmountain road across the Great Smoky Mountains National Park. This will keep this area a wilderness. Thanks go to all the individuals and organizations that wrote letters and attended meetings to protest against the proposed transmountain road. Perhaps in some small measure we have all helped to save the Smokies.

Backyard Birding

ANNIE RIVERS FAVER
Department Editor



A Curious Observation of the Snowy

The ocean and salt marsh with their tidal comings and goings are in fact my “back yards” when we are at Pawleys Island in that area of the South Carolina coast known as Waccamaw Neck.

In the afternoon of 23 September 1967, while strolling on the beach, I came upon a Snowy Egret fishing in the surf. Never have I seen a species of egret, heron or ibis in all my birding years, in any season, feeding in the edge of an ocean—the Atlantic, the Pacific, the Gulf, in West Indian waters or in European countries I have visited.

It was a comical sight! The tide was out, and gentle. My Snowy walked straight into the waves as far as it evidently deemed wise or safe—sometimes its legs, tail feathers and a portion of its belly were submerged—then it would quickly turn around facing inland, draw a bead on a fish, hunch down and make the usual lunge, oftentimes splashing water all over itself but coming up with a catch everytime. Then it would beat the oncoming waves by racing like crazy to the dry sand or a more shallow place. Back it would go, often wavering as if a bit drunken, I presumed because it wasn’t used to the stronger and quicker movement of the ocean. The fish were from 2 to 3 inches long and I could not tell what they were.

Is this a rare practice? What about spoonbills, cranes, limpkins, etc.?

I wonder that such a source of food has not become “common ground” for more species of waders.

At this same time, the vast salt creek at the back of our slim island was in mud flats and puddles, where dozens of Snowys, Commons, Louisianas, Little Blues and Green Herons were feeding as per usual.—KAY C. Sisson, 1617 Tanglewood Road, Columbia, S.C.

A Summer Visit with Mrs. Morrison

For three months each summer, I wonder if it is quite bright to continue this birdwatching business. Once it gets into the blood you learn to live with the hazards of risking sun and heat stroke, fighting your way through clouds of fiendish yellow and black flies, listening for bird songs but keeping one eye peeled for local reptiles while it becomes a way of life to be constantly covered with chigger and mosquito bites. But June has arrived, most of the migrants have gone on to nesting grounds, the summer residents are well on their way to setting up housekeeping, and the observer finds that it is time to start looking for nesting species.

Uppermost in my mind was to find families of the Red-cockaded and Pileated Woodpeckers. In May I had sighted two pairs of the former but lost them to

the deep, inaccessible pine woods. By 22 July I had found my first family of Red-cockaded Woodpeckers. They gave themselves away by their constant chattering in loud voices as they explored the scrub oaks, then onto limbs and trunks of pines. The three young ones were half grown because they could keep up with their parents, following them constantly, apparently unafraid as I progressed with them. To my surprise they were not marked but were solid colors of black, dark and light grey, reminding me of shrikes. On 14 August a family of three was found in an entirely different area. My third family was seen on 24 August in a swamp working over some dead and live pines, and the young one was a darker duplicate of its parents.

On Saturday morning, about 8:00, 19 August, Mrs. Paul H. Rogers, 1105 Dogwood Lane, her granddaughter, Kathy, and I found a resplendent male Pileated Woodpecker, calling at intervals while he pecked away at a dead cypress trunk. Within minutes he had worked his way up an open swamp where he was joined by his mate and two young ones whose progress we had been following after they had come into the open from a protected cove. It was with genuine reluctance that we watched the family disappear from sight into the shadowy depths of the cypress and pines.

In this same region two days before, I had been a fascinated observer to an interesting bit of by-play. Listening, I heard a parent calling to its young. In a small black gum, 10 feet away, was a male Blue Grosbeak sitting near the top. From his light blue bill dangled the longest, greenest Hornworm (caterpillar of the Sphinx Moth), that any bird parent could be justly proud to capture. The little one on a limb below would have nothing to do with that monstrous object. Slowly, the caterpillar began to get shorter, and I realized that the grosbeak was swallowing it, segment by segment. Meanwhile his calls had attracted two young, exquisite little Prothonotary Warblers, duplicates of their canary-yellow mother. A flashing dart of golden-orange flew by me to join his family in the black gum. In his bill, crossways, was a big light green grasshopper that he kept offering to his two. They ignored him, hopping excitedly around the grosbeak, chattering and begging to be fed the big green worm. The grosbeak just sat there unconcernedly, slowly consuming his mid-morning snack. Meanwhile, the young grosbeak flew to a nearby willow and found some smaller caterpillars more to his liking. Eventually the Prothonotary family left carrying their grasshopper with them. After the green caterpillar was consumed, the parent joined his offspring in the willows.

In this same morass on 14 August, a Belted Kingfisher flew in from the creek with a 4-inch fish in his bill and tried to perch on a dead pine bough. Out flew a pair of Eastern Kingbirds with their two offspring, scolding him repeatedly with their noisy chattering. These were followed by a family of five more kingbirds to chase him up the open swamp. As the kingfisher neared the middle, seven Red-headed Woodpeckers, their crimson heads flashing brilliantly in the sunshine, joined the chase to get him off their territory. All this excitement aroused the little sandpipers and had them "peet-weeting" all around me. The Solitary and Pectoral Sandpipers with their companions, the Lesser Yellowlegs and always the Killdeers, took off over the swamps with a great hullabaloo. At the same time, the kingfisher had alighted at the far end of the open area and with strident cries, called in his mate and their young one.

Late Sunday afternoon, 2 July, Mrs. Joe W.B. Taylor, Lakewood, Hartsville, S.C., and I heard a Red-tailed Hawk low overhead, circling the fields and woods where we were walking. Going into the forest, searching with eyes upwards, we found a Red-tailed Hawk sitting about 10 feet up on the limb of an oak. Approximately 50 feet away was, apparently, the nest placed high in a great red oak. It was a huge, bulky structure of dead oak leaves and branches, built up in the fork of the last large limb and trunk at the top of the tree. She just sat

there and watched us as we viewed her from all sides. Our presence caused no perceptible reaction other than following us with her big dark eyes, although we never saw her head move. We called our husbands to come and see our hawk, after which we had to leave her just sitting quietly, while her mate circled overhead.

The Great Crested Flycatcher and the Eastern Wood Pewee are quite common, but a rare pair of Acadian Flycatchers were seen off and on all summer at Kalmia Gardens over Black Creek. Blue-grey Gnatcatchers were usually company for the birdwatcher on many walks.

I have followed the progress of two Eastern Bluebird families, both of which had holes placed immediately below a small limb in the top of straight, slightly tapered trunks of dead pines. In one, lower down, was the home of a Red-bellied Woodpecker, and the other trunk was the home of a Red-headed Woodpecker family with two little ones. One bluebird family raised a single and the second family had two young to increase our bluebird population.

Our three resident vireos, Red-eyed, White-eyed and Yellow-throated, were all seen with second or even a third brood (White-eyed) as late as 29 August. Warblers which remain and nest in our region during the summer are: Prothonotary, Parula, Yellow-throat and the Yellow-throated, Pine, Prairie (building a second nest the middle of July), Kentucky, and Hooded. Two young Hooded Warblers were seen having a suggestion of a black hood beginning to develop by 26 July. Orchard Orioles and Summer Tanagers were present in great abundance, with many young of both seen in June and July. By the first of August all the orioles had disappeared, but as late as 31 August the Summer Tanagers were still singing in poplars and black gums.

During the middle of June, a hundred or more American Goldfinches were seen feeding in a field by Mrs. P.A. King of Hartsville. A day or two later I watched two to three dozen feeding along the right-of-way of a railroad track, all trying to feed on the dandelion seed heads. On 25 July a pair was observed in some tall pines, and on 4 August one was seen chased from a pine by a Pine Warbler. A beautiful male was seen 18 August by Mrs. Paul H. Rogers and party on a causeway near Black Creek. According to *South Carolina Bird Life*, it would be rare for them to nest in our Pee Dee area.

On the morning of 31 August, while driving down a road between a forest of old established pines and gums, adjacent to Black Creek swamp, and a grove of 20-year-old pines, I had to stop because of dozens of young Robins. They were coming from the swamp to the pine grove, landing on wires, right-of-way and in the road as they joined others already exploring the pines. The degree of coloration ranged from very little orange with spots, to full colored breasts with faint markings. Very few adults were in the group. They were an extremely noisy bunch, constantly chattering and calling to each other. It seemed to be a nursery school out on a foraging expedition!

Of particular interest this summer have been observations of the Blue Grosbeaks. Apparently this has been a successful season because I have never seen them as numerous. I have noticed them on wires over oat, soybean and corn fields, edge of woods along the roadsides, low shrubs and trees bordering the swamps, and pine groves with young ones in all stages of development, noted by color changes. By 1 September males were still being seen singing in the top of shrubs and low trees. This species is one of the constant singers of the summer and one of the most glorious birds of the south. A rapid warble of paired notes, rising and falling, ringing out over fields or from a black gum or willow beside the swamps. Robert Ardrey in his "Territorial Imperative" expresses my feelings when he says: "Such joys we constantly seek and unexpectedly they are thrust upon us by nature's bounty."—WILLIE M. MORRISON, 1610 Home Avenue, Hartsville, S.C., 6 September 1967.

General Field Notes

THOMAS L. QUAY, *Department Editor*
Department of Zoology, North Carolina State University, Raleigh, N.C.

NEW DEPARTMENT EDITOR

Effective with the March 1968 issue James F. Parnell will become editor of the General Field Notes department of *Chat*. Dr. Parnell will continue to edit the Southern Atlantic Coast Region of *Audubon Field Notes*. Records for both publications should be sent to him at the Department of Biology, Wilmington College, Wilmington, N.C.

Your editor is deeply grateful to Thomas L. Quay, who has edited the General Field Notes for Volume 31. Working with him has been both a pleasure and a privilege. Unfortunately his responsibilities at North Carolina State University no longer allow him the large amount of free time necessary for handling correspondence with contributors and preparation of copy. Dr. Quay will continue to serve *Chat* in an advisory capacity.—ED.

The Alligator Bay, N.C., Heron Rookery.—Alligator Bay Heron Rookery is 3.2 miles S-SW of Sneads Ferry, N.C., and 4.2 miles west of New River Inlet. It is composed of three small islands at present, with a total land mass of less than 3.5 acres. The highest points above the high-water mark are less than 3 feet. The two higher islands are mostly covered with myrtle bushes, pines, a few cherry trees, and a thick undergrowth of wild mulberries. The third island has a few myrtles about 5 to 6 feet high. These islands were built of spoil material dredged from Alligator Bay in 1931 during the construction of the Intra-coastal Waterway.

The best reports from local landowners indicate that a small number of herons and egrets were nesting at the Alligator Bay site in 1939, in young myrtle shrubbery (*Myrica cerifera*). None of the local residents noted any interruption as a breeding colony from 1939 to about 1960. I made a few observations during the 1960 through 1964 nesting seasons, and have watched the colony more intensively the past three years.

In the spring and summer of 1961 an estimated 100 pairs of birds nested on two of the islands. The nesters at this time were: Common Egrets (*Casmerodius albus*), Louisiana Herons (*Hydranassa tricolor*), Snowy Egrets (*Leucophoyx thula*), Little Blue Herons (*Florida caerulea*), and a few Green Herons (*Butorides virescens*).

Thirteen Glossy Ibis (*Plegadis falcinellus*) were seen for the first time there in 1962. Due to working in Washington, D.C., during that summer, I was unable to determine the results of their nesting. Twelve Cattle Egrets (*Bubulcus ibis*) were nesting there in 1964 and have continued to do so each year, in increasing numbers.

My first trip to the colony this year, on 6 May, revealed 200 active nests. The nests at this time, with the exception of two, were in the egg stage. Some nests were not over 2 feet above the ground. On 29 May, I returned to the islands to find a virtual disaster area. Scores of young herons and egrets were found dead in the nest and on the ground. Many nests in the egg stage were destroyed. A strong northeaster storm struck the week before, causing abnormal

tides and blowing down some trees. However, numerous nests had new clutches of eggs in them; these would have been laid by birds in a different nesting cycle than the ones whose nests had just been destroyed. Only three Glossy Ibis' nests were found, compared to thirteen in 1962.

This year (1967) was the first time that the myrtle bushes on the third island were large enough to support nests. Three nests of the Louisiana Heron and one Little Blue Heron nest were found with eggs, plus about a dozen Green Heron nests.

No other observations were made by me until 4 September 1967, because of summer employment with the U.S. National Museum. At this time all of the herons and egrets had fledged, and only about 20 or 30 immatures were roosting there. A strong squall, reportedly toward the last of July, had struck the colony another hard blow. Many trees were broken down and nests, eggs, and young were thrown on the ground. However, this was an exceptionally hard year and should not be taken as a standard.

The future of this heron rookery looks promising, because the growth of trees on the third island will increase the nesting area. If present trends persist the nesting population should increase. However, a new bridge under construction will span the Intra-coastal Waterway less than 2 miles SW of the colony. If the herons can survive this incroachment on the surrounding areas, the colony may survive.—GILBERT S. GRANT, *Route 1, Box 363, Sneads Ferry, N.C., 15 September 1967.*

Observation of Broad-winged Hawk Migration at Table Rock, N.C.—In an attempt to add further data to that which has accumulated over the past few years concerning migration of the Broad-winged Hawk (*Buteo platypterus*) in North Carolina, several of us from the Charlotte area visited Table Rock Mountain in northwestern Burke County on 16 September 1967. In the party with me were Mark Simpson, Vaud Travis, and David Wright. This particular site was chosen on the basis of advice from Fred Behrend of Elizabethton, Tennessee, who has done extensive field work in the Blue Ridge Mountains. Table Rock itself forms the summit of the mountain which is on the eastern edge of the Blue Ridge. It affords a commanding view of Hawksbill Mountain and Linville Gorge as well as Lake James and the city of Morganton.

We reached the summit of the mountain about 11:30 AM. We were immediately astounded by the large number of Broad-winged Hawks which were circling the peak. They were apparently starting from just above the trees in the surrounding valleys and then rising with the thermals, as is characteristic of migrating hawks. From 11:30 to 11:50 we counted approximately 200 hawks in a single flock over the mountain. Shortly thereafter (11:55) another flock of approximately 40 birds was spotted to the north. This second flock did not reach Table Rock, but instead flew out over the valley in a southeasterly direction. During the next hour, we saw only a few more individual birds, which brought our total for the day to 251. All of them appeared to be moving from northwest to southeast.

Our observations do not seem to conflict with previous ones. In 1952, T.W. Simpson stated that there was definitely a flyway of Broad-wings down the eastern slope of the Blue Ridge, but at that time the relative importance of this flyway was not known (*Chat*, 16:92). Simpson's description of the actions of the birds in their migratory flight follows closely our own observations at Table Rock. Behrend suggested in 1956 that there was a flyway between Grandfather Mountain and the Black Mountains (*Chat*, 20:80). This would include the area we observed at Table Rock. Tom Parks in 1957 reported large aggregations of Broad-wings in the vicinity of Lenoir, although the dates of the heaviest flights were somewhat later than our observation date (*Chat*, 21:88).—DOUGLAS PRATT, *Route 3, Box 113L, Charlotte, N.C., 4 December 1967.*

Bald Eagle at Greensboro, N.C.—We observed a mature Bald Eagle flying over Greensboro, N.C., at approximately 10:30 AM on 12 September 1967. When first spotted, it was flying just above tree-top height over an area of shallow water and mud flats at Horsepen Creek, in the northwestern section of the city. There are several large lakes in the area. The eagle circled a number of times overhead, gained altitude, and finally disappeared to the northeast of us. In the bright sunshine, all field marks were clearly visible. The temperature was 59 F and the wind was from the northeast at 6 to 11 mph. As far as we can ascertain, this is the first Guilford County record since the one on 9 September 1945 by George Smith and Larry Crawford (*Chat*, 18:30-40).—MRS. EDGAR E. EDWARDS, 3412 Onslow Road, Greensboro, N.C., AND MRS. JAMES GERTZ, 4123 Driftwood Road, Greensboro, N.C., 14 September 1967.

Osprey Migration over Topsail Island, N.C.—There was a strong flight of Ospreys (*Pandion haliaetus*) over Topsail Island on the coast of North Carolina on 8 October 1967. My observation site was at the northern end of the island, about 4 miles below (southwest) New River Inlet. In the little over two-hours time that I was there (11:00 AM to 1:15 PM), I counted a total of 29 Ospreys. These migrating hawks were in groups of 1 to 6 birds each and all were moving in a southerly direction. They alternately flapped and sailed, and for the most part were about 500 feet up in the sky. The wind was from the northeast, at an estimated 10 to 15 knots per hour. The sky condition varied between partly cloudy and cloudy. One Marsh Hawk and two Sharp-shinned Hawks were also seen, in migration, at this time.—GILBERT S. GRANT, Route 1, Box 363, Sneads Ferry, N.C., 10 October 1967.

Least Tern Nesting at Lake Marion, S.C.—On 11 June 1967, Cynthia Post and I were driving on U.S. Route 301 across Lake Marion, 2 miles NE of Santee, Orangeburg County, S.C. An embankment for Interstate Route 95 had just been built over the lake parallel to 301. We saw some Least Terns (*Sterna albifrons*) gathered on the unpaved roadbed. I searched for 10 minutes and found one Least Tern nest with two eggs. There were five other pairs which showed territoriality, and altogether 30 birds in the area.

Frederick Post later made four visits to the colony. On 18 June he found five nests, each with two eggs. As with the nest found on 11 June, all were unlined depressions in the fine, crusty gravel surface. He counted 20 pairs of Least Terns in the colony.

The territories were at least 15 to 20 meters apart, and the colony extended along the embankment for 900 meters. Nests were in the most barren part of the roadbed. The embankment was 70 meters wide, and its surface about 10 meters above the lake.

On 9 July, Frederick Post found that all the nests of 18 June had been destroyed by cars or pedestrians that visited the area for fishing. However, he found three new nests, each with two eggs. One of these was in the depression left by a tire. On his last visit, 6 August, he saw no Least Terns in the area. No young terns were found on any of the visits.

In 1960, Mrs. Ellison D. Smith reported a colony of about 20 pairs of Least Terns nesting at Lake Murray, S.C. (*Chat*, 24:99-100). This colony nested again in 1961 (*Chat*, 25:89). Its history since then is not known (Mrs. Smith, personal communication). The Lake Murray site is 110 miles from the coast. The colony we found on Lake Marion is 65 miles from the coast.

The Least Terns nesting in the interior of South Carolina are presumably from the coastal area and if so, would be the subspecies *S.a. antillarum*, which breeds along the Atlantic and Gulf coasts from Massachusetts to Texas (*A.O.U. Check-list*, 1957, p. 238-239). The colonies at Lake Murray and Lake Marion would be the only instances of this subspecies' nesting in the interior, other than for two sites in Florida.

The subspecies *S.a. athalassos* breeds in the interior of the United States along major river systems (A.O.U. *Check-list*, 1957, p. 239). However, Mengel (*Birds of Kentucky*, 1965, p. 263), who examined Least Terns from Kentucky and Tennessee, did not find the inland subspecies separable from the Atlantic coast subspecies. If an inland subspecies of the Least Tern does exist, do birds from the interior of South Carolina belong to it, or to the Atlantic coast subspecies?

The large lakes which have been made in the interior of South Carolina—Moultrie, Marion, Murray, Clark Hill, and Hartwell—may well provide an environment and pathway for further colonization of the interior by the Least Tern.—WILLIAM POST JR., Aiken, S.C., 25 September 1967.

Two Specimens of the White-winged Dove Collected in North Carolina.—The first specimen record of the White-winged Dove (*Zenaida asiatica*) for North Carolina was secured at Cape Lookout, on Core Banks, on 11 October 1966. I had been seeing this bird for some days before this date, in company with a small flock of 12 to 15 Mourning Doves, and felt sure I knew what it was. While I was out in the dunes gunning early in the afternoon of 11 October, about ½ mile north of the Cape Lookout Coast Guard Station, this particular group of doves went past me going north and pitched into the knee-high grass about 1,000 feet away. I got "Rattler," my Chesapeake Bay Retriever, at heel and continued up that way. The doves started flushing, but I waited until the White-wing jumped, and I knocked it down with the first barrel of my old Parker. "Rattler" retrieved the bird. The noon weather, as taken from the log of the Cape Lookout Coast Guard Station, was: wind west/northwest, the force 12 to 15 knots; temperature 64 F; visibility unlimited; barometer 29.88; sky clear. I donated this White-winged Dove to the North Carolina State Museum of Natural History, Harry T. Davis taking it to Raleigh on 13 November 1966. This specimen is now mounted (NCSM Catalog No. 2882) and will be placed on display in 1968. It should be mentioned that large numbers of Mourning Doves use all over Core Banks in the early fall each year, feeding extensively on the seeds of the various kinds of grasses and other herbaceous plants.

The second specimen of the White-winged Dove for North Carolina was taken by Palmer Suggs on 31 December 1966, while on a dove shoot in a field 1 mile west of Kinston. This bird was turned over by Mr. Suggs to Sam Poole, District Game Biologist of the N.C. Wildlife Resources Commission, who presented it to the State Museum also; it has been made into a study skin and is NCSM Cat. No. 2785.

There are two sight records of the White-winged Dove in North Carolina, each of single birds and both at the Pea Island National Wildlife Refuge—one on 23 June 1942 and the other on 9 November 1958 (*Chat*, 23:37,88).

The first record, and specimen, of the White-winged Dove in South Carolina was secured on 6 December 1965, James Island, near Charleston, again through the means of a dove hunt. This bird, now in the Charleston Museum, has been examined taxonomically and been found to belong to the eastern subspecies, *Z.a. asiatica* (*Chat*, 30:52).—EUGENE B. POND, *United States Coast Guard Station, Cape Lookout, Harker's Island, N.C.*, 24 April 1967.

Saw-whet Owl at Kline, S.C.—At 12:15 AM on 30 December 1966, a Saw-whet Owl (*Aegolius acadicus*) flew low in front of my car and was struck to the ground. This occurred 1 mile south of Kline, in Barnwell County, S.C., 8 miles north of Allendale, on U.S. Route 278 (*Chat*, 31:50, in Briefs for the File). Slash pine plantations about 10 years old were on both sides of the road. The bird was an adult female, with little subcutaneous fat. The stomach was filled with a pellet of shrew remains. This appears to be the first record for Barnwell County.—WILLIAM POST JR., Aiken, S.C., 3 February 1967.

Kirtland's Warbler at Eastover, S.C.—In the mid-morning of 22 September 1967, I watched a Kirtland's Warbler moving about in the shrubbery outside my dining room windows. The field marks matched the published descriptions and illustrations perfectly, for fall-plumaged birds, including the interrupted eye-ring and the tail wagging. The birdbath had a "dripper" going to attract the migrating birds, but this bird did not go into it; a Yellow-breasted Chat, a Blue-winged Warbler, and some other warblers had been going to the dripping water. This species seldom bathes, but will flutter about in dew-dampened leaves in the early morning (H. Mayfield, *The Kirtland's Warbler*, 1960). Azaleas, a camellia, many nandinas, a medium-sized cuninghamia, an unpruned eleagnus, and a small live oak are around and near the birdbath; and the Kirtland's Warbler was evidently feeding on insects in this evergreen jungle. There are callicarpa and lantanna bushes in front of the other shrubbery, that offer berries, but I did not see the Kirtland's eat any of these berries.

My home is in a direct line between places where a specimen of this rare species has been collected before, on its migratory pathway (Mayfield, 1960). This is my third sight record of the Kirtland's Warbler at Eastover, the others having been on 14 October 1949 (*Chat*, 13:79-80) and 1 September 1951 (*Chat*, 15:83).—ANNIE RIVERS FAVER, *Route 2, Box 6, Eastover, S.C., 16 November 1967.*

Correction.—William C. Grimm has called to our attention a typographical error in his note "A Case of Mate-changing by Nesting Bluebirds" (*Chat*, 31:76, September 1967). The first sentence of the fourth paragraph should begin, "On the morning of 30 May . . ."

BRIEFS FOR THE FILES

Compiled by JAMES F. PARNELL

(All dates 1967 unless specified)

Common Loon, 1 very late at Wrightsville Beach, N.C., on 28 July, Frances Needham and Dorothy Earle.

Red-throated Loon, a late individual was found at Wrightsville Beach on 10 June by Frances Needham.

Red-necked Grebe, 1 seen at close range in Hatteras Inlet on North Carolina's "outer banks" on 28 December 1966 by Douglas Pratt.

Wilson's Petrel, 1 seen on 27 and 28 May only a few yards offshore near Atlantic Beach, N.C., by John Fussell. A second bird was found in the "bight" at Cape Lookout, N.C., on 4 July by John Fussell and Tommy Wade.

Double-crested Cormorant, a single bird was seen on the late date of 27 June at Fayetteville, N.C., by Doris Hauser and Derb Carter.

Magnificent Frigatebird, single individuals were seen on 12 July 1966 at Ocracoke, N.C., by Mrs. Jack Willis and on 26 July 1967 at Wrightsville Beach by Frances Needham.

Cattle Egret, summer records were received from two inland South Carolina localities. A flock of 50 birds was seen in Sumter County on 4 July by Douglas Pratt, Joe Norwood, and Vaud Travis; while in Aiken County approximately 90 individuals were seen on 5 July by William Post.

White Ibis, two immature birds were seen near Atlantic Beach, N.C., on 9 July by John Fussell.

White-fronted Goose, 1 was captured at the Santee National Wildlife Refuge on 25 January and 5 were seen there on 9 February by the refuge manager, Thomas Martin.

Red-breasted Merganser, a single immature bird was seen on 28 June at Wrightsville Beach, N.C., for the first indication of nesting of this species in North Carolina, Frances Needham.

Marsh Hawk, 1 seen over the marsh near Atlantic, N.C., on 2 July by Harry T. Davis, John Fussell and others.

Purple Gallinule, 1 observed carefully near Raleigh, N.C., on 11 August by Mike Browne.

Dunlin, 1 seen on 3 and 6 May in northeastern York County, S.C., by Mrs. Flo Cobey.

Western Sandpiper, 1 seen at Raleigh on 9 April by Mike Browne and Lee Jones.

Semipalmated Sandpiper, an albino individual was seen among a flock of normal birds on 21 May at Garden City Beach, S.C., by Douglas Pratt.

Upland Plover, two seen on 14 August at Wrightsville Beach by Dorothy Earle.

Scissor-tailed Flycatcher, a single bird was seen near Kelly, N.C., on 19 July by Aubrey Shaw and reported to Harry T. Davis.

Robin, an immature bird was found at Greenfield Lake in Wilmington, N.C., by Edna Appleberry. This is the first evidence of nesting in this area.

Prairie Horned Larks, 9 adult and 2 immature birds observed closely at the Asheville-Hendersonville Airport on 16 July by Henry D. Haberyan.

Solitary Vireo, individuals seen on 30 June and from 9 to 11 July at Umstead Park near Raleigh by Harry LeGrande.

Cerulean Warbler, one seen at Charlotte, N.C., on 29 April by Mrs. Flo Cobey.

Blackburnian Warbler, one seen on 14 May near Hertford, N.C., by N.C. Fulford and P.O. Jarvis.

Yellow-breasted Chat, an individual was seen during the first week in February at Ocracoke by Mrs. Jack Willis.

Brewer's Blackbird, one observed carefully in southwest Mecklenburg County, N.C., on 30 October 1966 by Douglas Pratt.

Yellow-headed Blackbird, one observed carefully on 30 July at Hilton Head, S.C., by Dr. and Mrs. Maurice Chanock.

House Sparrow, a young albino individual was seen being fed by two normal birds at Raleigh on 5 June, Mike Browne.

Brown-headed Cowbird, a **Painted Bunting** was observed feeding an immature cowbird on 20 July near Wilmington by Polly Mebane.

White-crowned Sparrow, a single individual was seen near Duck (Caffey's Inlet) on the North Carolina coast on 14 May by John L. Thompson.

BOOK REVIEWS

THE SHOREBIRDS OF NORTH AMERICA. Gardner D. Stout, editor; Peter Matthiessen, text; Robert V. Clem, artist; Ralph S. Palmer, species accounts. Viking Press, N.Y. 1967. 270 p. (10 x 14 inches). 32 color plates. \$22.50.

It is difficult to imagine how an editor could possibly find a better combination of gifted contributors than Gardner Stout engaged to produce *The Shorebirds of North America*. The result is a book of incomparable beauty, readability, and authoritative information. The beauty comes from the superb reproduction of Clem's exquisite paintings. The readability is in Matthiessen's text, which makes the reader long for the sights and sounds of distant marsh and shore. The species accounts by Dr. Palmer are presented in the style adopted for the *Handbook of North American Birds*, of which he is editor. The two independent divisions of the book permit the reader to browse with Matthiessen or quickly locate precise data with Palmer. I do not mean to sell Matthiessen's text short. It is full of fascinating information delightfully interspersed with anecdotes and appropriate word pictures, but the references are unobtrusively placed at the end

of the text lest they distract the reader from vicariously searching for the first Knot's nest seen by man.

Shorebirds of North America is a masterpiece of printing, and a fine example of how loving attention to detail can produce a book that is really a work of art. Every bird watcher will want a copy, but for shorebird buffs it will be indispensable.—ELOISE F. POTTER

BIRDS OF AMERICA. John James Audubon. Republication. Dover Publications, 180 Varick St., New York, N.Y. Illus. (black and white only). 7 vols. \$2.50 each.

Though *Birds of America* was enormously popular during Audubon's day, and though the plates are still admired and sought after, the text has long been out of print. Dover has recently corrected the situation by reprinting in its entirety the 1840-1844 octavo edition in seven volumes. This first reprinting of Audubon's text since 1871 also contains all 500 plates, here reproduced in black and white. To make the work more accessible to modern readers, the plates have been interspersed with the text, and two new indices to changes in nomenclature have been prepared by John Bull. These correlate old common and scientific names with new, and new with old. There is a new introduction by Dean Amadon, Lamont Curator of Birds, American Museum of Natural History.—EFP

OKLAHOMA BIRDS: Their Ecology and Distribution, with Comments on the Avifauna of the Southern Great Plains. George Miksch Sutton. University of Oklahoma Press, Norman, Okla., 1967. Illustrated with line drawings by the author. 674 p. \$9.95.

There are state bird books and state bird books. But seldom do we find a unique combination of accuracy of reporting, beauty of presentation, and depth of ornithological understanding such as is found in *Oklahoma Birds*. From the pen of George M. Sutton, one of America's foremost writers and painters of birds, this book deserves a place on the shelf of any connoisseur of bird books. Within its pages Dr. Sutton has presented pertinent information which reaches far beyond the boundaries of the state of Oklahoma. From cover to cover, *Oklahoma Birds* is full of originality, a far cry from the usual "more-of-the-same" state book.

In his introduction, Dr. Sutton tells of his early interest in the birds of the Southwest and of his work in Oklahoma since 1952 as a Professor of Zoology at the University of Oklahoma. His discussion of the ecology of the state is very interesting. Avoiding a simple textbook-style account, the author presents his own observations and a number of questions designed to spark the curiosity of future naturalists working in the area. He discusses extensively the inroads made on the natural scene by our rapidly-expanding civilization, and many very recent trends in avian populations are here given what may be their first scholarly attention.

One surprise that the reader has at first is that the author uses the individual species discussions for simply an account of the records of the bird in Oklahoma and surrounding states. This is an exhaustive treatment of the information, and indispensable to the ornithologist planning to work in the area, but a disappointment to the layman in search of exciting reading. This disappointment is short-lived, however. Under the headings for the various orders and families of birds Dr. Sutton has written fascinating accounts of these families as a whole. In this way, the birds of Oklahoma are discussed in their natural context and the reader begins to see that birds are no respecters of political boundaries, and that our birds are only a small segment of the vast avian world. This is a superb contribution seldom found in a state bird book.

In this manner, Dr. Sutton has created both an indispensable scientific tool and an enjoyable contribution to America's ornithological literature.—DOUGLAS PRATT

PARENTAL CARE AND ITS EVOLUTION IN BIRDS. S. Charles Kendeigh. Illinois Biological Monographs, Vol. XXII, No. 1-3. University of Illinois Press, Urbana, Ill., 1952. illus. index. 343 p. paperback. \$4.00.

Kendeigh's detailed study of parental behavior in birds is based primarily on 15 years of intensive research on the nesting of the House Wren, accompanied by a thorough analysis of all previous breeding studies in the class Aves. The first chapter discusses the techniques of gathering and analyzing data and describes the sophisticated electronic equipment used in much of the work. Kendeigh then presents a detailed study of the nesting of the House Wren. This lengthy chapter includes a voluminous amount of data presented on charts, tables, and graphs which closely parallel the text. Kendeigh discusses the territorial behavior of the male, nest building by the female, egg laying, incubation, brooding, feeding, activity at night, rhythm in attentive behavior, and the time of beginning and ending the day's activities. The data reveal that the basic behavioral pattern of nesting is that of alternating periods of attention and inattention by the adults with respect to their housekeeping activities. Kendeigh presents evidence to indicate that the length of the inattentive period is determined by the amount of time required by the bird to fill its stomach with food. The attentive period—incubating, brooding, and feeding—then lasts while the food is digested, and the return of hunger pains is probably the initial stimulus for resuming the inattentive period. On a much less detailed level, Kendeigh then discusses the known nesting behavior of 20 other species, most of which are Passerines.

The remaining half of the book is devoted to a thorough study of the evolution of parental behavior by means of an exhaustive survey of all avian orders and numerous families. A large portion of this section is devoted to an analysis of the broad trends in the evolution of parental care, primarily with regard to the changes in the sharing of responsibility between the sexes.

With its vast body of nesting data and a bibliography of over 900 listings, *Parental Care and Its Evolution in Birds* is an indispensable reference work for use in behavior and life history studies, while the well documented discussion of evolution is fascinating reading for anyone desiring a deeper understanding of avian biology.—MARK SIMPSON JR.

BIRD PHOTOGRAPHY AS A HOBBY. Eric Hosking and Cyril Newberry. Medill McBride Co., Inc., N.Y., 1962. illus. 95 p. \$2.95.

Eric Hosking is well known as Great Britain's foremost naturalist-photographer, and his authoritative little book provides an excellent introduction to the fascinating world of bird photography. Every aspect of the subject is discussed with a wisdom born of long experience. The authors begin with the choice of equipment—cameras, lenses, filters, light meter, tripod, films—and proceed to discuss the design, construction, and placement of blinds for a wide variety of subjects and locations. Detailed instructions are presented for blinds in trees, on cliffs, by the seashore, in swamps, and in areas subject to violent weather; and all aspects of photographic technique using these blinds are presented in great detail. There is a full chapter on stalking birds in the field through the use of long-range telephoto lenses, while the book contains over 50 photographs to illustrate the birds, equipment, and techniques discussed in the text. The authors also include full chapters on the subjects of flash photography, color film techniques, photography of birds in flight, and movie photography. Although the major emphasis is on large cameras, there is also a considerable amount of information dealing with 35 mm equipment.

Bird watchers with a desire to capture their feathered friends on film would do well to use *Bird Photography as a Hobby* as a basis for getting started in this enjoyable pastime.—MARK SIMPSON JR.

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OUR COVER-Douglas Pratt contributed the cover drawing of a male Black-throated Green Warbler and also the Solitary Vireo which appears on page 3. John Henry Dick contributed the Loggerhead Shrike on page 11. We are grateful to both artists for their efforts to make *Chat* beautiful as well as informative.

NOTES ON THE SUMMER BIRDS OF THE BRUSHY MOUNTAINS

MARK SIMPSON JR.

Rising abruptly from North Carolina's rolling western piedmont are two regions of mountainous terrain, known collectively as the Outer Blue Ridge. These two ranges, the South Mountains below Morganton and the Brushy Mountains of Wilkes and Alexander Counties, lie some 15 to 30 miles southeast of the Blue Ridge itself and are separated from this major range by a rolling hill country whose elevation averages slightly above 1,000 feet. With numerous peaks rising above 2,500 feet, these two ranges frequently reveal a curious mixture of typical piedmont and mountain avifauna; and for this reason they serve as valuable areas for studies of altitudinal limits of nesting for numerous species. This paper is based on seven years of random observations in the area known as the Brushy Mountains.

The Brushy Mountains lie almost exactly on the boundary line between Wilkes and Alexander Counties, where they extend for over 30 miles in a west-southwest direction from Fox Knob in northwestern Yadkin County. For some 20 miles distance, they maintain an average altitude well above 2,000 feet; and there are some ten peaks in excess of 2,500 feet, with the crest of the range occurring at Poore's Knob (2,750 feet). On the south the range is penetrated by the South Yadkin River system, while the Yadkin River drains the range on the north. Most of the region is heavily forested with second growth consisting of tulip tree, sycamore, beech, maples, oaks, hemlock, and pines. Orchards and a few cultivated fields are scattered through the region; and rhododendron, laurel, dogwood, and alder are common along ravines and streams.

Those avian species whose occurrence is of significant interest will be discussed in detail, while the remaining species will simply be listed in accordance with the American Ornithologists' Union's *Check-list of North American Birds* (5th edition, 1957).

WOOD DUCK (*Aix sponsa*)—An adult female with six young was observed on Fox Mountain Lake at 1,300 feet in June 1963. Although Pearson, Brimley, and Brimley (1942) note that the Wood Duck is much more abundant in the low coastal region, it has been recorded nesting at about 1,800 feet in Cades Cove in the Great Smoky Mountains by Stupka (1963), while Anderson (1959) noted that the species is present through the nesting season at Asheville. I have also found the young of this species on several occasions in July along the South Yadkin River less than 5 miles from the Brushies.

RUFFED GROUSE (*Bonasa umbellus*)—I have heard this species drumming on Fox Mountain at 1,500 feet and on Poore's Knob at 2,500 feet in April 1963; and two adults were seen at 1,900 feet in October 1961. Stupka (1963) reports nesting in the Great Smoky Mountains as low as 2,000 feet, so their occurrence in the Brushy Mountains is not too unusual.

CHUCK-WILL'S-WIDOW (*Caprimulgus carolinensis*)—This species is confined to the lower elevations, with two records in late May 1963 along the South Yadkin River below Cove Gap at about 1,200 feet.

SOLITARY VIREO (*Vireo solitarius*)—Nests of this species have been found at 1,200 feet on Fox Mountain and at 2,500 feet on Poore's Knob. Wendell Smith (personal communication) observed males in song through the breeding season at 1,500 and 1,900 feet, while my records show numerous singing adults in May and June in scattered regions above 1,500 feet. According to Pearson, Brimley, and Brimley (1942), nests of this species have been taken in the pied-

mont at Statesville and Raleigh. Stupka (1963) gives 2,000 feet as the approximate minimum elevation for nesting in the Great Smoky Mountains, while Brooks (1944) reports nesting as low as 1,000 feet in West Virginia.

BLACK-THROATED GREEN WARBLER (*Dendroica virens*)—This species is associated with hemlock, especially along ravines and streams, although its occurrence is highly localized. Wendell Smith (personal communication) has recorded two different males in song at the height of the breeding season, while my records show observations of singing males in June of 1963 and 1965 at about 1,800 feet. No nests have ever been located in the Brushy Mountains. This species is also known to occur regularly on Morrow Mountain near Badin, N.C., where Trott (1955) first recorded their presence.

CHESTNUT-SIDED WARBLER (*Dendroica pensylvanica*)—A single male in song has been noted near an orchard at 2,500 feet in June of 1963 and again in June 1965. No nest has ever been located. This species rarely occurs below 3,000 feet in most of the southern Appalachians. Stupka (1963) reports its most frequent occurrence between 4,800 and 5,800 feet in the Great Smoky Mountains, with 3,000 feet as the general minimum altitudinal limit.

OVENBIRD (*Seiurus aurocapillus*)—This species is common throughout the Brushies, with no records below 1,000 feet. The majority of all observations are above 1,500 feet.

AMERICAN REDSTART (*Setophaga ruticilla*)—This warbler is common along the South Yadkin River system in the rolling piedmont up to around 1,000 feet. Above this elevation it is infrequently observed, with no records above 1,700 feet.

ROSE-BREASTED GROSBEEK (*Pheucticus ludovicianus*)—An adult male was observed at 2,600 feet on Poore's Knob in June 1963. Stupka (1963) records the presence of this bird during the summer as low as 1,460 feet in the Great Smoky Mountains, although he gives 3,000 feet as the approximate minimum nesting elevation.

SLATE-COLORED JUNCO (*Junco hyemalis*)—This species has been recorded on Poore's Knob at 2,600 feet and 2,200 feet in May and June 1963 and also at 1,900 feet in late July 1966. Wendell Smith (personal communication) reports an individual singing on 10 July 1962 at 2,000 feet near the Brushy Mountain Community Center. The occurrence of this species during the nesting season is somewhat unusual at these altitudes, although no evidence of a nest has ever been found. Stupka (1963) reports that 74% of all nesting records in the Great Smoky Mountains occur above 4,900 feet, with 2,600 feet as the minimum altitude for summer occurrence. Additional field work is required to determine if this species does in fact nest in the Brushy Mountains.

ADDITIONAL SUMMER RESIDENTS

Green Heron (*Butorides virescens*)
Turkey Vulture (*Cathartes aura*)
Black Vulture (*Coragyps atratus*)
Red-tailed Hawk (*Buteo jamaicensis*)
Broad-winged Hawk (*Buteo platypterus*)
Bobwhite (*Colinus virginianus*)
American Woodcock (*Philohela minor*)
Mourning Dove (*Zenaidura macroura*)
Yellow-billed Cuckoo (*Coccyzus americanus*)
Screech Owl (*Otus asio*)
Great Horned Owl (*Bubo virginianus*)
Barred Owl (*Strix varia*)
Whip-poor-will (*Caprimulgus vociferus*)
Chimney Swift (*Chaetura pelagica*)



Ruby-throated Hummingbird (*Archilochus colubris*)
 Belted Kingfisher (*Megaceryle alcyon*)
 Yellow-shafted Flicker (*Colaptes auratus*)
 Pileated Woodpecker (*Dryocopus pileatus*)
 Red-bellied Woodpecker (*Centurus carolinus*)
 Hairy Woodpecker (*Dendrocopus villosus*)
 Downy Woodpecker (*Dendrocopus pubescens*)
 Eastern Kingbird (*Tyrannus tyrannus*)
 Great Crested Flycatcher (*Myiarchus crinitus*)
 Eastern Phoebe (*Sayornis phoebe*)
 Acadian Flycatcher (*Empidonax virescens*)
 Eastern Wood Pewee (*Contopus virens*)
 Rough-winged Swallow (*Stelgidopteryx ruficollis*)
 Barn Swallow (*Hirundo rustica*)
 Blue Jay (*Cyanocitta cristata*)
 Common Crow (*Corvus brachyrhynchos*)
 Carolina Chickadee (*Parus carolinensis*)
 Tufted Titmouse (*Parus bicolor*)
 White-breasted Nuthatch (*Sitta carolinensis*)
 House Wren (*Troglodytes aedon*)
 Carolina Wren (*Thryothorus ludovicianus*)
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 Brown Thrasher (*Toxostoma rufum*)
 Robin (*Turdus migratorius*)
 Wood Thrush (*Hylocichla mustelina*)
 Eastern Bluebird (*Sialia sialis*)
 Blue-grey Gnatcatcher (*Polioptila caerulea*)
 Loggerhead Shrike (*Lanius ludovicianus*)
 Starling (*Sturnus vulgaris*)
 White-eyed Vireo (*Vireo griseus*)

Yellow-throated Vireo (*Vireo flavifrons*)
 Red-eyed Vireo (*Vireo olivaceus*)
 Black-and-white Warbler (*Mniotilta varia*)
 Parula Warbler (*Parula americana*)
 Yellow Warbler (*Dendroica petechia*)
 Black-throated Blue Warbler (*Dendroica caerulescens*)
 Yellow-throated Warbler (*Dendroica dominica*)
 Prairie Warbler (*Dendroica discolor*)
 Louisiana Waterthrush (*Seriurus motacilla*)
 Kentucky Warbler (*Oporornis formosus*)
 Yellowthroat (*Geothlypis trichas*)
 Yellow-breasted Chat (*Icteria virens*)
 Hooded Warbler (*Wilsonia citrina*)
 House Sparrow (*Passer domesticus*)
 Eastern Meadowlark (*Sturnella magna*)
 Red-winged Blackbird (*Agelaius phoeniceus*)
 Orchard Oriole (*Icterus spurius*)
 Common Grackle (*Quiscalus quiscula*)
 Brown-headed Cowbird (*Molothrus ater*)
 Scarlet Tanager (*Piranga olivacea*)
 Summer Tanager (*Piranga rubra*)
 Cardinal (*Richmondia cardinalis*)
 Blue Grosbeak (*Guiraca caerulea*)
 Indigo Bunting (*Passerina cyanea*)
 American Goldfinch (*Spinus tristis*)
 Rufous-sided Towhee (*Pipilo erythrophthalmus*)
 Chipping Sparrow (*Spizella passerina*)
 Field Sparrow (*Spizella pusilla*)
 Song Sparrow (*Melospiza melodia*)

SUMMARY

Eighty-four species of birds have been recorded in the Brushy Mountains during the nesting season of late May, June, and early July. Several species, including the Solitary Vireo, Black-throated Green Warbler, Chestnut-sided Warbler, Rose-breasted Grosbeak, and Slate-colored Junco, have been observed during the nesting season at elevations somewhat below their predicted limits. Further work is required to determine the ecological requirements of these species in order to account for their presence in the Brushy Mountains.

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I wish to thank Wendell P. Smith for permission to publish his notes and for his many helpful suggestions during the course of the field work.

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 P.O. Box 167, Statesville, N.C., 25 June 1967

THE EIGHTH BIRD AND NECTAR CENSUS

A.L. PICKENS

One of the most lasting personal memories of the British Museum is of the old Egyptians' paintings. The three primary colors, red, blue and yellow, were very obvious. So was one of the secondary colors, green. But while they could carve the amethyst, violet and orange as pigments they appeared not to recognize. These were noticed only where red and blue ran into each other, or red and yellow similarly merged very narrowly at the edge of adjoining color areas.

How could one avoid contrasting early civilization's short-coming in color distinctions with the colorful and color-loving hummingbird's ability in the same field? Red is undoubtedly a favorite; the crimson tint is apparently now favored above the scarlet. Thus we are not surprised to find violet the bird's second preference and orange the third. Green as sixth ranks lowest. Blue and yellow are just above it in controversial order. So numerous are yellow-flowered species they may deceive by sheer weight of numbers, while blue is often so slightly contrasted with green as to be merely mildly conspicuous. An esteemed former teacher—Dr. William Kepner, now in his nineties—found certain natives in the Philippines very weak in some phases of color distinction. Green they thought of as "little-black." Some farmers may still refer to vigorous healthy corn growth as "black." Chief Sam Blue during his life gave the same Catawba word for both blue and green. When protested, he answered, "They are about the same!"

In testing hummingbirds' color preferences, resort was had to artificial flowers with glass nectaries, but standing out without foliage. Blue appeared to lead yellow. Mrs. Lura P. Garrison kindly recorded all visits by the Ruby-throated Hummingbird to her garden flowers. Here, too, blue led the yellow. However, a puzzling concomitant development seemed iconoclastic. Violet was visited more often than red with our artificial flowers. Further observation showed that red was such a favorite it was apt to be visited first and the nectary completely drained. With the red empty, mere pop-calls among the other flowers scrambled statistics. Resort was had to measuring the fluid taken, and red again forged ahead.

In recent years it has been possible to secure statistics on colors selected by bower-birds in the Australian area. Green would appear to lead, suggesting something of a camouflaging reaction in all this remarkable color response; but until uniformly fashioned and sized objects of varying colors can be used, we must delay conclusions.

Dr. Otto Porsch of the Hochschule fuer Bodenkultur in Vienna, during a correspondence of some 30 years, suggested adding to these lists one of flowers to which birds reacted negatively. Silk Oak (*Grevillea robusta*) much visited by larger California birds seems to discourage hummingbirds with an erect spike-like formation of each flower, apparently preventing a near approach to the nectary. In all the decades in which these bird and nectar censuses have been taken (see bibliography at end of this paper), twice in each decade, no one has written of a hummingbird visiting the common southern magnolia (*M. grandiflora*). This negative observation Dr. Joseph Grinnell, another esteemed teacher, supported in the west. Yet the related tulip poplar, with sepals at times living spoons of syrup, is visited.

The mere pollen-producing wind-pollinated trees are not attractive. At times neglect may be merely local. Ruby-throat examined but was not seen to feed from our gorgeous tropical *Tigrida*, though large bees visited them. The almost perfect geometry may have repelled a bird who had been deceived by the all too common artificial flowers somewhere. California hummers may appear ig-

norant of the rich blue bird-flower (*Salvia patens*). Cherokee pea was finally brought to bloom near our old home but seems in the higher piedmont to bloom too early for hummingbirds to visit. In the second census, scarlet loco, western azalea, bell phacelia, fire-cracker and thistle sage were brought to the attention of western bird-lovers. Five years later, in the third census, it was suggested that the cheesy odor of century-plant flowers indicated bat pollinators. Later suwar-row and White-winged Doves were guessed as symbionts. Both relations have been confirmed by S.M. Alcorn and his associates (*Science*, 19 May 1961).

In our mountains does rose-colored *Chelonia*, or turtle-head, draw Ruby-throat? On the coast how does it affect Cherokee pea, or *Erythrina*? And on the Gulf plain how do yellow and orange varieties of *Macranthera*, or Spanish Princess, rank in the bird's favor?

Three families of flowers—Figworts, Mints, and Peas, in order—furnish more bird hosts and have bird-specialized species. Lily and Thistle families rank next but with no notable specialization. In less numbers quite a group of other families show hosts and one or two specialized species.

The bird and nectar censuses began on the west coast in 1930. References for the publication of the various reports are listed in the bibliography below. From our garden, and from reading, three additional species are offered: Crowfoot Family. Scarlet Clematis, *Clematis texensis*. Red. Heath Family. Sweet Pepperbush, *Clethra alnifolia*. White; rarely pink. Mint Family. Peppermint, *Mentha piperita*. Violet or lilac.

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- 1729 Lombardy Circle, Charlotte, N.C., 26 June 1967

CONSERVATION

AND THE CAROLINAS

MARIE B. MELLINGER, *Department Editor*

Bluebirds, Unlimited

Since writing of the vanishing bluebirds in the June 1967 *Chat*, we have had information from various parts of the country on projects designed to help and bring back the bluebird. I have borrowed the title for this column from one of these, an organization called *Bluebirds, Unlimited*, an education program of the Grand Rapids, Michigan, Audubon Club. In its sixth year of operation, they have helped plan many bluebird trails. This year they will offer and distribute 10,000 twelve-page brochures on the bluebird, including plans for bluebird houses. This brochure is available for 10¢ from the Grand Rapids, Michigan, Audubon Club, 54 Jefferson, S.E., Grand Rapids, Michigan 49502.

Another organization is the *American Association of Bluebird Fanatics*, of the Richmond, Kentucky, Garden Club, "dedicated to the preservation and furtherance of the bluebird." There is also a *National Association for the Protection and Propagation of Purple Martins and Bluebirds*. They put out a book, for 50¢, available from Gerald A. Dryer, Secretary, 611 S. Water St., Crawfordville, Indiana 47933.

R.E. Ware reports that over 400 bluebird boxes were set out on the Clemson University campus. He had students keeping records of box occupancy and will write a report of the results. Professor Ware also received over 800 requests for plans for the bluebird boxes. For those who are interested, write Prof. R.E. Ware, Dept. of Zoology, Clemson University, Clemson, S.C. 29631.

Wm. G. Duncan of 519 Ridgewood Road, Louisville, Kentucky 40207, will also send directions for making a "proper" bluebird house, or will sell finished houses. Mr. Duncan has long been a "bluebird booster," sending out much material on conservation in general and on bluebirds in particular to anyone interested.

Interest in bluebirds seems to be growing all over the country. In Wisconsin, bluebirds have become a 4-H project, with 4-H members establishing bluebird trails and following a program outlined by the Wisconsin Society for Ornithology. The Wisconsin Society has also put out a brochure, W.S.O. Bulletin no. 137, entitled *Bluebird Trails Guide*, available from Mrs. Paul Romig, secretary, Green Bay, Wisconsin, for 35¢ a copy. In Marion County, Iowa, Boy Scouts have laid out a bluebird trail and kept detailed records of laying and hatching. They report that bluebirds, almost extinct in that part of Iowa, have definitely increased in numbers. In Leland, Michigan, Scout Troop no. 29, over the years, have issued some 3,000 plans for bird houses, and put up over 1,400 bird houses and feeders.

The bluebird is the state bird of New York and Missouri. In New York, Camp Fire Girls started a campaign to bring back the state bird. Another program was sponsored by the New York State College of Agriculture, at Cornell University, Ithaca, New York. They have issued a brochure (10¢ for non-New Yorkers) called *Bluebirds in New York*. We have not heard from Missouri.

Dedicated individuals are also at work on bluebird projects. Frank Irwin of Decatur, Illinois, with the aid of Decatur Audubon, has placed bird houses

all over his county. Tobe Gish writes that 300 bluebird nest boxes have been placed in Muhlenberg County, Kentucky, in the heart of the strip-coal mine area. Jeremy A. Felland, Park Naturalist for Toledo, Ohio, started a bluebird campaign in that city. At Watt's-Bar Resort, Watt's-Bar Dam, Tennessee, Mrs. Katie Marshall placed 22 bluebird houses and had 21 occupied. A bluebird trail was started by Stiles Thomas, New Jersey insurance broker, who, with 105 houses, brought bluebirds back to Bergen County.

Someone suggested that golf courses would be good sites for bluebird boxes. This has been done at the Durham, N.C., Country Club, and resulted in a bluebird population explosion of 14 families raised on the golf course. This project was started by Mrs. George Penney and her seventh grade science class.

Almost all of these bluebird enthusiasts agree on two basic things. Bluebirds have been scarce in their areas because of use of insecticides (bluebirds are mostly insect eaters) and because of a lack of nesting holes. They also agree that bluebirds can be helped by providing them with nesting sites. This should be a challenge to bird clubs and individuals to start bluebird projects in their own communities. Let's all work for Bluebirds, Unlimited!

Air Pollution

It seems a little incongruous to look out the window at a panorama of trees and mountains, and write about air pollution; but a recent session at the Conservancy Conference vividly brought out this ever increasing problem. Anyone living near an industrial area will be increasingly aware of this growing menace to health.

In a graphically illustrated article in *Popular Gardening and Living Outdoors*, fall and winter issue, 1967, it was pointed out that air is polluted by motor vehicles, furnaces, and even such seemingly harmless pursuits as burning leaves and rubbish. "The air is filled with 130 million tons of noxious chemicals every year, including 48,000 tons a day of sulphur-dioxide from burning coal."

What can an individual do about this? He can work for legislation to compel motor vehicles to have anti-pollution devices, and for factories to filter noxious fumes. He can see that his own vehicle is "kept tuned for efficient combustion, and parts checked carefully," for 60% of local air pollution can be traced to motor vehicles.

In the above mentioned magazine, Dr. James G. Telfair, Director of the American Medical Association's Department of Environmental Health, is quoted as saying that "the individual may feel the smoke he throws into the air from a defective furnace is insignificant, but the aggregate can be tremendous."

Virginia C. Dennis, in the Barnesville, Georgia, *News-Gazette*, wrote, "with a larger investment of research money, a better disposal technology might be devised in five to seven years, and fully installed in another ten or twelve. There is even reason to believe that the air pollution associated with automobiles can be brought into control, if we continue to demand it, and are willing to pay for it. Our health and welfare are at stake."

Everyone should read a free brochure issued by *The Conservation Foundation*, 1250 Connecticut Avenue, Washington, D.C. 20036, issued January 31, 1968, and entitled *When Will We Have Cleaner Air?* Please send for this and read it thoroughly, if you are at all interested in maintaining a healthy environment.

Charles Hudson recently wrote a fascinating column in the *Atlanta Constitution*, in which he said we are overlooking one of the greatest sources of natural air conditioning, our shrubs and trees. He quotes a report from the University of Wisconsin Landscape Department, and maintains that planting trees in our cities and along our highways will filter air in six ways:

1. they dilute bad air by giving off pure, clean oxygen.
2. they trap dust particles until they are washed to the ground by rain.

(Continued on page 25)

Backyard Birding

ANNIE RIVERS FAVER
Department Editor



Tinklebells Warn Birds

Mrs. Carl E. Kleiber of Wadmalaw Island, S.C., gives the following bird-saving suggestion:

"I've seen much written about birds banging into large windows but no mention of the solution which we have found most effective. The problem was worrying us until someone gave us wind bells—the old-fashioned, glass kind that tinkle with the slightest breath of air. We hung them before the double glass doors—and no more dead birds.

"I have recently found brass bells from Korea that make a most musical sound and these do duty at the picture window. A short wooden arm is sometimes needed to hang them from."

Foot-warming Trick

To see a Blue Jay pecking ice off a limb $\frac{3}{4}$ inch in diameter in front of him so that he could jump over and stand on the warmer wood was quite an interesting "movie." The chipped ice was visible. A grackle did the same thing 30 minutes later in the same myrtle bush in our backyard. Both were about four feet above ground. After pecking a warm place they remained seated for about 15 minutes each. The Blue Jay and the grackle were "headliners" during the sleet and snow that covered Pitt County, N.C., January 10-12, 1968. It was on January 10, about 9 AM, that the birds came.—WILBUR C. ORMOND, Ayden, N.C. [I have observed Cardinals doing the same thing.—DEPT. ED.]

Open Fields—Winter 1967-1968

The experimental fields of Coker's Pedigreed Seed Company farms are within a few minutes drive in any direction around Hartsville, S.C. Some fields are bordered by woods of tall pines and mixed second growth of hardwood trees. Others are next to deep drainage ditches whose banks are covered with weeds, blackberry bushes and seedlings of chinaberry, wild cherry, gums, privet bushes gone wild, cherry laurels and various oaks.

During the winter months, these ditch banks are favorite foraging places for the sparrows. Flocks of White-throats, Song and Chippies in company with Vesper, Field and English, at times, even a few Fox Sparrows nearby, are continually a source of interest to the observer as one notices the variation in behavior among birds of the same species.

Along one bank where the earth is piled high, overgrown with blackberry bushes and weeds, two subadult White-crowned Sparrows, rarely seen, are in

company with White-throats, as they explore the vines. This is the third year that they have been seen in this particular place.

As one approaches the plowed corn fields, the throng of blackbirds takes to the air, wheeling about as they settle down to one feeding place or, if disturbed, rising and going further on down the field. The challenge is to find a different species feeding with the Red-winged Blackbirds, Starlings, crows and grackles. Becoming more commonly seen are the Brown-headed Cowbirds, with incidental appearances of Brewer's and Rusty Blackbirds.

Invariably in the corn fields and along the tractor roads are a pair or a dozen or more opalescent Mourning Doves. Walking up and down the rows with them are the Water Pipits announcing their arrival and presence with high call notes. Ever on the alert, they periodically stop, stretch their heads high and pump their tails three times or more. If all is well, back they return to their business of feeding.

A species that I did not expect to find in the corn fields is the Yellow-shafted Flicker. It is not unusual to see one to two dozen scattered over the area. I can never get close enough to make sure whether they are eating ants or corn. *South Carolina Bird Life*, page 330, states, "The corn is for the most part waste left in the fields and eaten only in small quantities."

All the other six species of woodpeckers are seen or heard at various times. The Pileated flying overhead or drumming on a tree trunk, Yellow-bellied Sapsucker pecking holes around a cherry laurel trunk or the Hairy pecking out a little round hole as he goes after something in an oak limb. The Red-bellied and Downy are commonly seen, but the Red-headed Woodpecker is becoming more scarce in the wintertime.

One particular clearing, bordered on the west by an uncultivated area, grown up in tall weeds, is a bonanza for several species. Truck loads of waste cotton linters and decayed seed hulls from the Oil Mill are dumped over the field. The more aged it becomes, the more attractive to the birds, especially the blackbirds, Eastern Meadowlarks, Killdeer, Robins and Cardinals. Snipe come in from the woods, unseen, until they hurl upwards from the open spaces and head for a drainage ditch or swamp. Myrtle, Palm and Yellow-throated Warblers fly in from the trees nearby to explore and seek goodies. Juncos by the hundreds are constantly darting down and, at the slightest disturbance, speeding back across the road, scattering into the trees and underbrush.

By the middle of February, small flocks of two to three hundred American Goldfinches, in company with dozens of Purple Finches, are feeding daily on the seeds of tall weeds growing in the humus soil. On the ground and upon the stalks, all our winter sparrows gather for sociability and nourishment.

Spotting hawks is a real pleasure and reward of driving around the open country side. They seem to have certain territories. One field will be the domain of a Sparrow Hawk, perched on a pole or wire. Others will have Marsh, Red-tailed or even a Red-shouldered Hawk flying high, back and forth, over the area.

Eastern Bluebirds and Loggerhead Shrikes are sometimes seen throughout the winter months, perching on wires and darting down to freshly plowed fields. One Catbird is spending the winter in a grove nearby. Though not always seen, its call may be heard from the underbrush mingling with calls from the Rufous-sided Towhees and Carolina Wrens. One may stand quietly near some fallen limbs and underbrush and catch a glimpse of the Winter Wren as it hops from the far side, frightening the Hermit Thrush which steals away and hides.

In the tall pines and mixed second growth of hardwoods, all the friends of the backyard may be seen. Brown-headed Nuthatches and Pine Warblers add their voices to the winter sounds of the chickadees and titmice. High overhead the flock of Golden-crowned Kinglets lets one know that they have arrived to join the company of their cousins, the Ruby-crowned Kinglets. Sud-

denly the movement of the trunk of a pine tree draws attention to a Brown Creeper working his way upward. This is an invitation to look for the White-breasted Nuthatch. In all probability, one will spot a pair working around an oak tree trunk. High on a limb will be seen our winter flycatcher, the Eastern Phoebe, getting set to dart off after an insect that flew by.

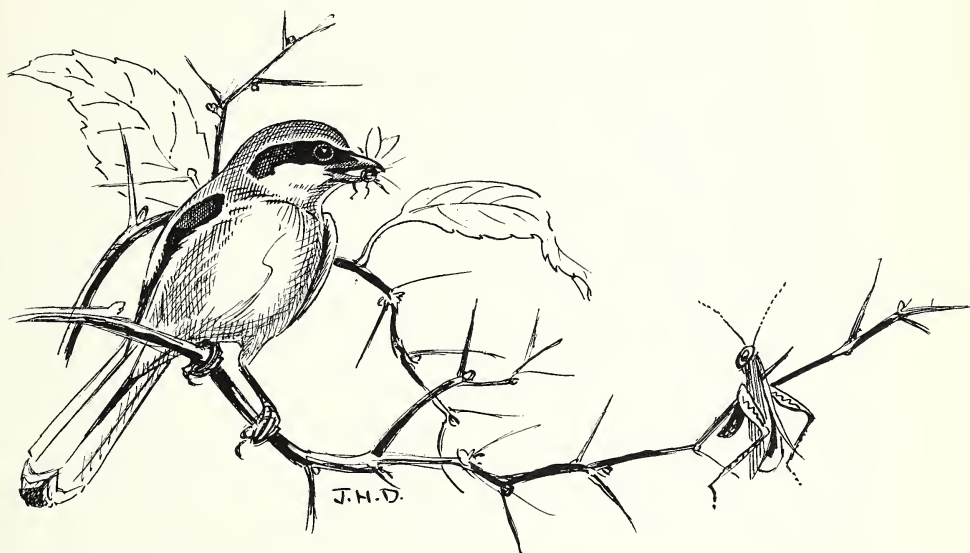
Why so much interest in these open fields?

It's a special way to bird-watch from the car during the winter months with their inclement weather problems.

When time is limited, a quick 15 minutes detour by a field to check it over is satisfying, then on to the grocery store or meeting that has to be attended.

Frankly, I get bored watching the hundreds of Purple Finches, dozens of Baltimore Orioles and those "blankity-blank" Starlings that take over the backyard. I just want to get away and see some "new faces," birdwise.

Probably, the best reason is just the pure joy and pleasure that comes from bird-watching.—WILLIE M. MORRISON, Hartsville, S.C.



**CHRISTMAS BIRD
COUNT—1967**

CHRISTMAS BIRD COUNT—1967	COAST			COASTAL PLAIN					PIEDMONT										MTN.									
	Individual Totals	Bodie-Pea Is., N.C. 31 December	Morehead City, N.C. 24 December	Wilmington, N.C. 30 December	Charleston, S.C. 30 December	Hilton Head Is., S.C. 28 December	Beaufort Co., N.C. 31 December	Pamlico Co., N.C. 29 December	Rocky Mount, N.C. 31 December	Wayne Co., N.C. 30 December	Columbia, S.C. 28 December	Aiken, S.C. 30 December	Henderson, N.C. 30 December	Raleigh, N.C. 29 December	Chapel Hill, N.C. 1 January	Greensboro, N.C. 30 December	High Point, N.C. 26 December	Winston-Salem, N.C. 30 December		Stanly Co., N.C. 29 December	Charlotte, N.C. 30 December	Greenville, S.C. 30 December	Piedmont, S.C. 29 December	Anderson, S.C. 1 January	Elkin, N.C. 26 December	North Wilkesboro, N.C. 22 December	Lenoir, N.C. 29 December	Great Smoky Mtn. Nat. Park, N.C.-Tenn. 30 December
Common Loon	179	10	40	56	57	7	1	3					2															
Red-throated Loon	208	18	12	176	2	*																						
Horned Grebe	327	43	23	19	113	4	101	23						1														
Eared Grebe	1	1																										
Pied-billed Grebe	274	47	16	31	42	11	23	10	6	4	8	14			10	9	11	8	10	1	8	3	1	1				
Brown Pelican	125		3	4	33	85																						
Gannet	360	83	125	152																								
Double-cr. Cormorant	582	6	213	232	80	36	15																					
Anhinga	9			2	5	2																						
Great Blue Heron	217	10	14	31	61	28	9	1	1	12	1	2	5	1	7	19	6	2	1	1	1	1	3	1				
Green Heron	5		1		2	1															1							
Little Blue Heron	37	1	2	1	27	6																						
Cattle Egret	1		1																									
Common Egret	101	7	4	34	32	24																	*					
Snowy Egret	35	5	2	1	23	4																						
Louisiana Heron	51	13	7	7	10	14																						
Black-cr. Night Heron	59	30	20	4	5																							
American Bittern	18	16	1			*	1																					
Wood Ibis	1				1																							
Glossy Ibis	10	9		1																								
White Ibis	11			5	6																							
Whistling Swan	334	237			9		88																*					
Canada Goose	4621	3326		208			225	4	8					1	37	419	14	37					342					
Snow Goose	3406																											
Blue Goose	5	4																							1			
Mallard	1720	95	3	426	122	*	13	50	14	5			24	30		262	97	210	321	18			5	24	1			
Black Duck	932	408	50	168	104	9				1			11	11		81	25	26	6				20	23				
Gadwall	434	77			301	2							13	13		12			5	1								
Pintail	3351	2824		300	220		2824												7									
Green-winged Teal	1448	985	36	204	117	3		2	1					2				18		2			78					

**CHRISTMAS BIRD
COUNT—1967**

[illegible]

[illegible]

CHRISTMAS BIRD COUNT—1967			COAST			COASTAL PLAIN										PIEDMONT										MTN.			
	Individual Totals		Bodie-Pea Is., N.C. 31 December	Morehead City, N.C. 24 December	Wilmington, N.C. 30 December	Charleston, S.C. 30 December	Hilton Head Is., S.C. 28 December	Beaufort Co., N.C. 31 December	Pamlico Co., N.C. 29 December	Rocky Mount, N.C. 31 December	Wayne Co., N.C. 30 December	Columbia, S.C. 28 December	Aiken, S.C. 30 December	Henderson, N.C. 30 December	Raleigh, N.C. 29 December	Chapel Hill, N.C. 1 January	Greensboro, N.C. 30 December	High Point, N.C. 26 December	Winston-Salem, N.C. 30 December	Stanly Co., N.C. 29 December	Charlotte, N.C. 30 December	Greenville, S.C. 30 December	Piedmont, S.C. 29 December	Anderson, S.C. 1 January	Elkin, N.C. 26 December	North Wilkesboro, N.C. 22 December	Lenoir, N.C. 29 December	Great Smoky Mtn. Nat. Park, N.C.-Tenn. 30 December	
Mockingbird	1407		25	19	87	42	40	58	24	17	15	45	16	30	164	82	201	71	146	99	124	9	11	33	11	1	15	22	
Catbird	87		46	12	31	46	*	1	1	1	1	12	12	1	27	4	4	6	1	2	19	14	2	1	3	2	2	1	
Brown Thrasher	242		8	10	957	175	2	120	310	4	7	52	120	100	55	184	748	173	1952	323	253	7	4	6	3	65	337	3	
Robin	6317		349	11	10	25	2	2	2	4	1	2	13	1	6	4	4	4	2	8	2	2	2	4	6	3	65	337	
Hermit Thrush	104		10	1	10	25	2	2	2	4	1	2	13	1	6	4	4	4	2	8	2	2	2	4	6	3	65	337	
Eastern Bluebird	441			3	2	1	32	5	1	1	10	5	5	21	52	89	33	16	35	53	19	4	5	10	5	10	24		
Blue-gray Gnatcatcher	9				4	1	2	2	3	3	1		49	15	138	67	65	15	43	2	10	1	27	4	2	4	3	165	
Golden-crowned Kinglet	733		20	5	50	36	3	2	3	6	4	44	52	31	250	146	99	44	31	26	22	4	17	12	7	6	4	1	
Ruby-crowned Kinglet	1643		7	8	235	450	72	21	2	6			31		250	146	99	44	31	26	22	4	17	12	7	6	4	1	
Water Pipit	332				31	35	42	70	70						41	41				69									
Cedar Waxwing	2136		52	17	17	25	8	12	1	4	5	28	55	64	74	251	231	24	972	57	145								
Loggerhead Shrike	306		317	191	4900	4	541	517	186	566	162	392	152	126	3143	1381	2633	528	1050	571	1026	950	152	246	52	30	82	557	
Starling	20455					1	4						*																
White-eyed Vireo	5					4	2																						
Solitary Vireo	4					2	2																						
Black-and-white Warbler	9				1	1	7																						
Orange-crowned Warbler	14				10	3	2						1																
Yellow Warbler	2																												
Myrtle Warbler	6172		2701	150	1233	775	324	138	117	34	16	14	13	22	118	170	64	53	69	52	53	3		*	26	4	23		
Yellow-throated Warbler	5					2	3																						
Pine Warbler	282		3	7	14	57	110	10		10	1	3	1	1	17	33	8	2	3	1	3		1	1			6	8	
Palm Warbler	38		4	1	12	7			1																				
Yellowthroat	68		4	1	23	24	3						1		1														
Yellow-breasted Chat	2		1																										
House Sparrow	5915		9	200	444	2	*	330	70	300	55	130	58	107	479	64	1082	481	400	541	293	20	51	518	67	5	100	109	
Bobolink	32		128	130	174	187	467	115	239	27	32	256	106	21	408	174	348	181	156	137	164	50	55	177	9	75	50	181	
Eastern Meadowlark	4047		199	737	27257	1500	1831	5011	1537	61	45	12850	83	218	67	425	312	5	710	338	143	25	775	305	1	1	1	18	
Red-winged Blackbird	54453		172	2	4	23	43	24	43	23	43	23	45	2	28	12	6	25	7	25	7	3000	*	*	*	*	*	3	
Baltimore Oriole	172		31	31	31	10	90	37	12	12	12	12	45	2	28	12	6	25	7	25	7	3000	*	*	*	*	*	3	
Rusty Blackbird	4689																												

CHRISTMAS BIRD COUNT—1967

ELOISE F. POTTER

During the 1967 Christmas Bird Count period 26 censuses were made in the two Carolinas between 22 December 1967 and 1 January 1968. A total of 241,140 individual birds were tallied, and 209 species identified. While the present count in no respect surpasses records set on previous counts, the participation was gratifying. The observers on the whole were in the field before dawn, stayed until late afternoon, and put in many party-miles on foot in spite of the cold temperatures and high winds encountered in the majority of the count areas. The generally high calibre of the field observations is indicated by the large number of records worthy of special notice in the local summary paragraphs.

Particularly significant is the record of an Eared Grebe on the Bodie-Pea Island, N.C., count. Only the second known record of this western species for the state, it may well be only the sixth for the entire East Coast. The Pine Grosbeaks seen in Stanly County represent the second published record of this species in the state.

The waterfowl totals are greatly reduced on the 1967 count, not because of any drastic change in the populations but because no report was received from Mattamuskeet National Wildlife Refuge following the retirement of the compiler, Willie Gray Cahoon.

There has been a decided change in the number of Great Black-backed Gulls recorded on the North Carolina coast and inland along some of the major rivers. Wilmington, for example, recorded 69 of this species in 1967 compared to 4, 5, 14, 4, and 37 on the five preceding counts. The total number of Great Black-backs on the present count was 438, compared to 270 in 1965 and 225 in 1966.

The winter of 1967-1968 seems to be unusually good for kinglets. The Ruby-crowned Kinglet was recorded in all count areas and the Golden-crowned in all but one of them, for a total of 733 Golden-crowns and 1,643 Ruby-crowns. Last year, with 29 count areas reporting, there were only 409 Golden-crowns recorded, and the species was not found at all in nine localities. There were 905 Ruby-crowns tallied last year with the species found in all but one locality.

The Evening Grosbeaks have failed to make their expected biennial appearance in the Carolinas. Reports of small flocks came from Chapel Hill and the Great Smoky Mountains National Park. Some other scattered reports are listed in the Briefs for the Files elsewhere in this issue; however, there obviously was no major flight this winter. In a report for *EBBA News* (31:5-14) on their banding of Evening Grosbeaks on the nesting grounds in New Brunswick, Canada, during June 1967, Mr. and Mrs. G. Hapgood Parks make the following statements which might well explain the scarcity of the species in the Carolinas this winter.

"Migratory Movement. Beyond the marked decrease in the local population the most striking change from conditions that we had noted during our two previous visits was the complete absence of any flight pattern that could be interpreted as a migratory movement. . . . To find a plausible explanation . . . one has but to recall the tremendous crop of natural food that burdened the trees in the boreal forests during the autumn of 1966. This copious supply of food in their own normal habitat counteracted any need for our species to travel southward in search of sustenance. As a result the expected winter flight to well-stocked feeders in the United States did not materialize and the birds' absence became a source of needless anxiety for many persons whose feeders stood unvisited by winter finches." Perhaps this was also the situation in the autumn of 1967.

A Word of Caution Regarding Chickadee and Grackle Sight Records.—Recently several compilers have sent in count reports listing Black-capped Chickadees outside the higher mountain areas of North Carolina and Boat-tailed Grackles great distances from salt marsh. While birds can and do at times occur far from their normal habitats, reports involving these two species must be subjected to special scrutiny. In the case of the grackle, one need only misjudge the size of the bird to be confused. In the case of the chickadee, the “northern” Carolina Chickadee (*Parus carolinensis extimus*) can be separated in the field from our more abundant race (*P.c. carolinensis*) by the observer with sharp eyes and ears. Persons unaware of the two races are likely to assume the larger Carolina Chickadee is a Black-capped (*P. atricapillus atricapillus*). Since the distribution of *P.c. extimus* is poorly known in the Carolinas, it is suggested that anyone finding a dead chickadee take it to a museum for examination and possible preservation as a study skin.

In view of the field problems involved it has been decided that until there is specimen evidence to the contrary, all grackles outside the coastal area will be considered to be Common Grackles and all chickadees outside the higher mountain areas will be considered to be Carolina Chickadees. Arbitrary though this may seem, I see no alternative.—EDITOR.

Aiken, S.C. (all points within a 15-mile diameter circle centered at Couchton, S.C.).—30 Dec.; 5:30 AM to 6:00 PM. Overcast; temp. 34 F to 58 F; wind NW, 0-7 mph. Two observers in one party. Total party-hours, 12.5 (2 by car, 10.5 on foot); total party-miles, 61 (57 by car, 4 on foot). **Total species, 67; total individuals, 1,523.**—Cynthia Post, William Post Jr. (compiler).

Anderson County, S.C. (all points within a 15-mile diameter circle centered at Anderson Airport).—1 Jan.; 7:30 AM to 6:00 PM. Heavy fog in morning, rain in afternoon; temp. 40 F to 38 F; wind NW, 0-6 mph. Six observers in 2 parties. Total party-hours, 16 (6 by car, 10 on foot); total party-miles, 210 (198 by car, 12 on foot). **Total species, 64; total individuals, 3,214.** **Rough-legged Hawk** (RCT, HRG) was observed perching and in flight at close range. This was a normal phase. All details were carefully observed and recorded. Although not unknown, they are unusual here, but appear to have become more common during the two preceding winters. Three **Whistling Swans** (AMT) were seen five days prior to day of count. They were heard whistling overhead and when seen were flying no more than 50 feet overhead in a tight “V”. Lack of any black in the plumage, black beaks, black feet and legs (appearing as a black “v” under the tail) were observed. Long outstretched necks, short legs, and all white plumage precluded mistaking them for Snow Geese or one of the white plumaged herons or egrets. The whistling call was similar to that of the Canada Goose. They were flying southwest, from the upper part of Hartwell Lake toward the Seneca River area.—Joan Geiger, H. Roland Geiger, Susan Geiger, Adair Tedards (compiler), R. Connor Tedards, Caroline Watson.

Beaufort County, N.C. (all points within a 15-mile diameter circle centered where Upper Goose Creek enters Pamlico River in central Beaufort County, including both sides of the river from Bath to Washington).—31 Dec.; 6:45 AM to 5:15 PM. Cloudy all day, intermittent rain in afternoon; temp. 32 F to 47 F; wind N to SE, 4-12 mph. Fourteen observers in 5 parties, 10 individuals working own yards. Total party-hours, 42 (25 by car, 2 by boat, 15 on foot); total party-miles, 134 (116 by car, 3 by boat, 15 on foot). **Total species, 79; total individuals, 21,260.** Dickcissel was at a feeder for several weeks. The larger than usual number of **Common Grackles** was due to two large flocks of nothing but grackles.—Ethel Barkley, Ruth Brown, Geraldine Cox (compiler), A.O. Edington, Everett Edwards, Sandra Edwards, James McLaurin, Mary McLaurin,

Louise Satterthwaite, Elizabeth Sterling, Hugh M. Sterling, Brenda Turnage, Marvin Turnage, Edward Watson.

Bodie-Pea Island, N.C. (all points within a 15-mile diameter circle centered 2.7 miles SSE of Bodie Island Lighthouse, to include the southern tip of Bodie Island, northern half of Pea Island National Wildlife Refuge, Wanchese section of Roanoke Island).—31 Dec.; 6:15 AM to 5:30 PM. Cloudy with intermittent light rain in late morning and late afternoon, ground bare, water open; temp. 32 F to 42 F; wind NE, 2-12 mph. Fifteen observers in 5 parties. Total party-hours, 47.25 (8 by car, 39.25 on foot); total party-miles, 179 (96 by car, 83 on foot). **Total species, 127; total individuals, 25,645.** Eared Grebe (MMB, PHW) was observed with 30x scope and 7x50 binoculars. At one time during the observation a Horned Grebe was about 10 feet from the Eared, affording good comparison. The bird was studied for about 20 minutes, during which time the observers approached to within 15 feet of the bird on the north impoundment of the Pea Island Refuge. All field marks were carefully checked. **Common Eider** (HLJ, DML) was observed for some time at 200 feet offshore with a 25x scope. The bird was apparently an immature male, as it had a few white areas on the back and lacked any barring on the breast and sides. Jones is familiar with the species on the coast of Maine and Canada. **Piping Plovers** (2 parties) were seen at several scattered locations within the count area as single birds or groups of two or three. **American Avocets** (2 parties) were a small portion of a much larger number present all fall in the area. The count of 525 **Forster's Terns** is by far the highest count of this species ever made in the area during the winter. **Black Skimmers** (HEL, PWS) were sitting on a sand bar with a group of gulls. An adult female **Saw-whet Owl** (HEL, PWS) was found dead on the road inside the count area just north of Wanchese, apparently having been hit by a vehicle sometime during the night before the count. The bird has been preserved as a study skin.—M.M. Browne, C.L. Gifford, H.D. Haberyan, F.S. Hespenheide, Mr. and Mrs. H.A. Hespenheide, J.L. Holloman, H.L. Jones, E.K. LeGrand, H.E. LeGrande Jr., D.M. Lewis, Mr. and Mrs. J.M. Potter Jr., P.W. Sykes Jr. (compiler), P.H. Warren.

Chapel Hill, N.C. (all points within a 15-mile diameter circle centered at intersection of Columbia and Franklin Streets).—1 Jan.; 5:30 AM to 5:00 PM. Partly cloudy to cloudy; temp 34 F to 45 F; wind light. Twenty-two observers in 9 parties, plus 7 individuals working own yards. Total party-hours, 49 (25 by car, 24 on foot); total party-miles, 216 (195 by car, 21 on foot). **Total species, 67; total individuals, 7,588.** **Lincoln's Sparrow** was banded by the Teulings on 25 December.—David Barnes, Dale Beers, Bill and Dan Dye, Martha Favre, Oliver Ferguson, Susan and Ashby Fristoe, Claude George, Elinor and Logan Irvin, Gerald MacCarthy, Johnnie Payne, Jo Peeler, Jim Pullman, Peter Scott, Mildred and Robert Sharpe, Claudia Sherk, Jean Stewart, Wilma Stuart, Elizabeth and Robert Teulings (compilers), Sue and Matt Thompson, Eleanor Wagstaff, James and Pauline Wearn, Josephine Weedon.

Charleston, S.C. (all points within a 15-mile diameter circle centered 15 miles N of Mt. Pleasant and just E of Hwy 17).—30 Dec.; 7:00 AM to 4:30 PM. Partly cloudy in morning; temp. 32 F to 60 F; wind E-NE, 5-10 mph. Thirty-three observers in 8 parties. Total party-hours, 69 (7 by car, 10 by boat, 52 on foot); total party-miles, 180.5 (62.5 by car, 60 by boat, 58 on foot). **Total species, 147; total individuals, 17,966.** **Common Eider** studied several minutes at close range by competent observers. Second state record, the first having been taken for the Charleston Museum. **Least Tern**, rare in winter, was seen by experienced observers.—T.A. Beckett III, Alan Bills, Roy Baker, Edwin Blitch III, Mrs. Jack Button, David Chamberlain, E.B. Chamberlain (compiler), N.A. Chamberlain III, Miss Ruth Clements, E.C. Clyde, Mrs. R.H. Coleman, Teague Cole-

man, D.M. Cupka, Edmund Cuthbert Jr., E.A. Cutts, J.H. Dick, H.W. Freeman, Devon A. Garrety, Mr. and Mrs. Richard Gingrich, Mrs. Leonard Glover, I.S.H. Metcalf, William McIntosh Jr., Mrs. Jean Monroe, Mrs. G.T. Prior, Nell Prior, Edwin Read, Cmdr. and Mrs. L.S. Smith Jr., Hugh Thompson, A.M. Wilcox, A.M. Wilcox Jr., David Yount.

Charlotte, N.C. (all points within a 15-mile diameter circle centered at intersection of 7th Street and Briar Creek as in past 25 years).—30 Dec.; 6:10 AM to 5:00 PM. Fair in morning and early afternoon, cloudy in late afternoon; temp. 26 F to 47 F; wind NE, 0-4 mph. Twenty-one observers in 8 parties, 1 individual working own yard. Total party-hours, 54 (20 by car, 34 on foot); total party-miles, 325 (300.5 by car, 24.5 on foot). **Total species, 71; total individuals, 5,594.** The **Green Heron** (Mrs. WGC, WBM) was an immature bird seen at a distance of 25 feet when flushed. The city is now burying most of the refuse, which has greatly reduced the food supply and consequently the **Ring-bills**. The **Great Horned Owl** and the large number (359) of **Rusty Blackbirds** were good finds for the area. The **Eastern Bluebird** count seems distressing; however, it may only be poor luck as one lady, reading of the count in the paper, called to say she regularly has been having up to 18 bluebirds at a time in her rural yard. (We confirmed they weren't Blue Jays!) Since this was the Silver Anniversary count, it is interesting to note that on the first census in the area in 1941 (1942 and 1943 were skipped) 4 observers were out for 9 hours and tallied 27 species and 571 individuals. Members of that party included one still a member of the Mecklenburg Club, Mrs. George C. Potter, and a now nationally known nature photographer, Jack Dermid. This year's total exceeded by eight species the previous highest Christmas count for the area.—Mrs. M.J. Barber, Jimmy Bookout, Mrs. Edwin O. Clarkson, Dr. and Mrs. W.G. Cobey, Mr. and Mrs. A.H. Dykema, J.P. Hamilton, Mrs. A.C. Hendren, Mrs. Willard W. McKeever, Dr. W.B. Mayer, Mrs. T.L. Millwee, Mrs. Preston Nowlin, Joseph R. Norwood (compiler), Mrs. Joseph R. Norwood, Mr. and Mrs. Shuford K. Peeler, Douglas Pratt, Mark Simpson, William Smith, Joan Templeton, David Wright (Mecklenburg Audubon Club, guests).

Columbia, S.C. (all points within a 15-mile diameter circle centered at intersection of Gill's Creek and Bluff Road).—28 Dec.; 7:00 AM to 5:00 PM. Intermittent rain; temp. 39 F to 46 F; wind E-NE, 4-8 mph and up to 25 mph during afternoon thunderstorms. Five observers in 2 parties. Total party-hours, 18 (13 by car, 5 on foot); total party-miles, 140 (128 by car, 12 on foot). **Total species, 63; total individuals, 15,454.**—Gilbert J. Bristow (compiler), Miriam Davis, Robert Overing, Kay Sisson, Norma Smith.

Elkin, N.C. (all points within a 15-mile diameter circle centered 3 miles N of Elkin).—26 Dec. Fair, ponds and streams open; temp. 32 F to 38 F; wind NW, light. Twelve observers in 3 parties, 5 individuals working own yards. Total party-hours, 53; total party-miles, 74. **Total species, 53; total individuals, 1,452.**—W.F. Burgess, T.R. Bryan, H.F. Cochran, J.H. Click, R.E. Henderson, Clara Henderson, E.M. Hodel, Lin Hendren (compiler), Freddie Mastin, L.H. Petree, Jerry Tysinger, Jim Uldrick.

Great Smoky Mountains National Park, N.C.-Tenn. (all points within a 15-mile diameter circle centered on Bullhead to include US 441 Pigeon Forge to Kephart Prong, Tenn. 73 Pittman Center to Metcalf Bottoms, Appalachian Trail Clingmans Dome to Newfound Gap, West and Middle Prongs Little Pigeon River, Little River, Emerts Cove, Wears Cove, Roaring Fork and LeConte Creek, Andrews Bald).—30 Dec.; 6:30 AM to 6:00 PM. Clear to partly cloudy; temp. 20 F to 44 F; wind variable, 0-12 mph. Twenty-five observers in 14 parties. Total party-hours, 103 (54 by car, 49 on foot); total party-miles, 361 (302 by

car, 59 on foot). **Total species, 60; total individuals, 4,034.**—Fred J. Alsop III, James Campbell, Robert Dunbar, Danny Ellis, Lloyd Foster, Roger Foster, Maurice Grigsby, J.C. Howell, Susan Hoyle, Tony Koella, Helen K. Lewis, Henry Lix, David MacLeod, Mrs. George W. McGowan, Robert A. Monroe, Mrs. Robert A. Monroe, Julia Moore, Louise Nunnally, Mrs. Earle Rankin, Mrs. E.T. Richards, Lynn Satterfield, Steve Satterfield, A. Boyd Sharp Jr., Ed Smith, Arthur Stupka, Mrs. Arthur Stupka, Maxie Swindell, Thomas Swindell, James T. Tanner, Richard C. Zani (compiler).

Greensboro, Guilford County, N.C. (all points within a 15-mile diameter circle centered at WBIG transmitter).—30 Dec.; 5:30 AM to 5:30 PM. Clear, heavy frost, some ice on lakes; temp. 22 F to 42 F; wind N-E, max. 6 mph. Thirty-eight observers in 11 parties. Total party-hours, 94 (48.5 by car, 45.5 on foot); total party-miles, 501.5 (454 by car, 47.5 on foot). **Total species, 87; total individuals, 12,228.** **Bachman's Sparrow (JWC), Tree Sparrow (IM), and House Wren (DB)** were unusual for the area at this season.—Mr. and Mrs. Donald F. Allen, Rose K. Avery, Mr. and Mrs. John R. Beaman Jr., Mrs. John F. Benson, David Burney, John W. Carr, Mrs. David A. Cason Jr., Ellene Y. Cobb, Inez Coldwell, Larry Crawford, Mr. and Mrs. G.W. Daniels, Jean F. Gertz, Howard H. Groover (compiler), Sidney Holmes, Mrs. Clarence Knight, Harold Le Duc, Mr. and Mrs. B.S. Lambeth Jr., James Mattocks, Mrs. Robert E. McCoy, Ethel McNairy, Ida Mitchell, Mrs. G.F. Norcross, Mrs. David Parsons, Mrs. George W. Perrett, Etta Schiffman, Mrs. William D. Seawell, Mrs. Archie D. Shaftesbury, George A. Smith, Mrs. Darl G. Tipton, Richard C. Ward, Mrs. Ralph H. Weisner, Oliver L. Williams, Robert L. Wolff, Helen J. Zuk.

Greenville, S.C. (all points within a 15-mile diameter circle centered at intersection of Hwy 29 and By-pass 291).—30 Dec.; 8:00 AM to 5:30 PM. Cloudy, clearing in afternoon; temp. 30 F to 42 F; wind 7 mph. Four observers in 1 party, 5 individuals working own yards. Total party-hours, 8.5 (7 by car, 1.5 on foot). **Total species, 47; total individuals, 1,680.**—Ruth Gilreath, Gladys Hart, Lillie Hart, Rosa Lee Hart (compiler), Martha Lawrence, May Puett, Lee Watson, Richard Watson.

Henderson, Vance County, N.C. (all points within a 15-mile diameter circle centered in Henderson).—30 Dec.; 7:30 AM to 4:30 PM. Very cold (32 F) in early morning, warming in afternoon. Thirteen observers in 2 parties, 2 individuals working own yards. Total party-hours, 8.5 (2.5 by car, 6 on foot); total party-miles, 56 (46 by car, 10 on foot). **Total species, 50; total individuals, 1,661.** Two **Baltimore Orioles** were seen at feeding stations, one at the Bachmans' and the other at the Flannagans'. Four were seen at the Bachmans' on 29 December and 1 January, and five on 2 January. The **Cooper's Hawk** was seen by part of the group just at it caught a Bobwhite.—Neita Allen, A.W. Bachman, Mrs. A.W. Bachman, Annie G. Burroughs (compiler), Mary Francis Chavasse, Mrs. Walter Dallas, Mrs. Eric Flannagan Sr., Mrs. Ernest Gierisch, Mae Hunter, Garnette Myers, Dr. and Mrs. Paul Stewart, Mike Stewart.

High Point, N.C. (all points within a 15-mile diameter circle centered at intersection of US 311 and Lexington Ave. in High Point).—26 Dec.; 5:45 AM to 5:00 PM. Clear; temp. 35 F to 50 F; wind variable, up to 15 mph. Ten observers in 3 parties, 2 individuals working own yards. Total party-hours, 28 (11 by car, 17 on foot); total party-miles, 188 (176 by car, 12 on foot). **Total species, 54; total individuals, 3,616.**—John T. Austin, John W. Austin Jr., David Burney, Anne Byerly, Sandra Edwards (compiler), Mrs. E.R. Lyon, James Mattocks, Mary Alice Siceloff, Clarence Velat, Ruth Velat.

Hilton Head Island, Beaufort County, S.C. (all points within a 15-mile diameter circle centered at Hilton Head Island Post Office).—28 Dec.; 7:00 AM to

5:30 PM. Heavy rain (1.44 inches), gales, and tornado alert in morning; clearing with winds diminishing to 15 mph in afternoon; temp. 49 F to 68 F. Thirty-three observers in 12 parties. Total party-hours, 97 (48 by car, 4 by bike, 44 on foot, 1 on horseback); total party-miles, 296 (250 by car, 5 by bike, 40 on foot, 1 on horseback). **Total species, 119; total individuals, 10,936.** Bobolinks (Mrs. AH), Least Terns (Mr. & Mrs. CSS), and Yellow Warblers (Mr. & Mrs. WHL) were unusual for the area at this season. The Yellow Warblers were carefully observed through binoculars by all parties under good lighting conditions.—Mr. and Mrs. John H. Adams, Dorothy Beetle, Mr. and Mrs. W.H. Branch, Mrs. Wallace Butler, Mrs. Winthrop Dow, Mrs. W. Goode, Mrs. Orion D. Hack, Mrs. Fred Hack, Mr. and Mrs. David Harrall, Mrs. Alva Hines, Charlotte Inglesby, Mr. and Mrs. John Jordan, W.H. Lawrence (compiler), Mrs. W.H. Lawrence, Mrs. Alfred Loda, Mrs. H.O. Lowden, Mrs. Olin McIntosh, Mr. and Mrs. E.O. Mellinger, Naomi Myles, Caroline Newhall, Anne Reddy, Marie Reddy, Mr. and Mrs. C.S. Sergeant, Mrs. Thomas Wamsley, Mr. and Mrs. Robert Whitney, Mrs. Carl Woodring.

Lenoir, Caldwell County, N.C. (all points within a 15-mile diameter circle centered in Lenoir).—29 Dec.; 7:00 AM to 7:00 PM. Morning partly cloudy, afternoon sunny and milder; temp. 20 F to 36 F; wind N-NW, strong in morning, light in afternoon. Eight observers in 3 parties, 4 individuals working own yards. **Total species, 45; total individuals, 1,236.**—Joan Austin, Isobel Bernhardt, Edna Bruner, E.M. Manchester, Mrs. E.M. Manchester, Fred May, Mrs. Fred May, Helen Myers (compiler), Thomas Parks, Mrs. C.S. Warren, Anne Wilcox, Miss George Wilcox.

Morehead City, N.C. (all points within a 15-mile diameter circle centered at Crab Point Intersection).—24 Dec.; 5:00 AM to 5:00 PM. Clear, cold; temp. 24 F to 53 F; wind NNW, 5-15 mph. Six observers in 3 parties. Total party-hours, 35 (5 by car, 30 on foot); total party-miles, 149 (138 by car, 11 on foot). **Total species, 114; total individuals, 6,561.** Green Heron (JF III) was seen on Bogue Bank. Cattle Egret (JF II, WH) was seen at Crab Point. Bald Eagle (WH) was seen from the Morehead-Beaufort Causeway.—David Barnes, John O. Fussell II, John O. Fussell III (compiler), Gilbert Grant, Will Hon, Tommy Wade.

North Wilkesboro, Wilkes County, N.C. (all points within a 15-mile diameter circle centered as in previous years).—22 Dec.; 6:30 AM to 2:30 PM. Cloudy with rain; temp. 65 F to 57 F; wind E, 0-8 mph. Three observers in 1 party. Total party-hours, 8 (6 by car, 2 on foot); total party-miles, 34 (30 by car, 4 on foot). **Total species, 37; total individuals, 696.** Blue Goose (two observers) was seen at close range.—Wendell P. Smith (compiler), Dr. and Mrs. Paul A. Stewart.

Pamlico County, N.C. (all points within a 15-mile diameter circle centered in Florence at the intersection of roads 1324 and 1329).—29 Dec.; 7:00 AM to 5:30 PM. Fair all day; temp. 34 F to 50 F; wind ESE, 0-10 mph, mostly calm. Four observers in 2 parties. Total party-hours, 16 (13 by car, 3 on foot); total party-miles, 88 (85 by car, 3 on foot). **Total species, 71; total individuals, 3,624.** Brewer's Blackbird was observed closely in good light in cow lot.—Geraldine Cox (compiler), Sandra Edwards, Brenda Turnage, Marvin Turnage.

Piedmont, S.C. (all points within a 15-mile diameter circle centered at the intersection of Hwy 8 and Interstate 85).—29 Dec.; 7:00 AM to 6:00 PM. Complete overcast to partly cloudy, light rain; temp. 29 F to 60 F; wind NNE, 0-5 mph. Two observers in 2 parties. Total party-hours, 10 (7 by car, 3 on foot); total party-miles, 80 (70 by car, 10 on foot). **Total species, 48; total individuals, 12,334.** Rough-legged Hawks were seen in very good light. Peregrine Falcon was studied while perched on a power wire for 20 minutes. There is one

previous winter record of the **Yellow-breasted Chat** in the area, on 15 December 1966. All Towhees were red-eyes. "Bronzed" grackles were observed.—Michael S. Anderson, Carl R. Garrison.

Raleigh, N.C. (all points within a 15-mile diameter circle centered at State Capitol Building).—29 Dec.; 6:30 AM to 5:00 PM. Partly cloudy early morning, clear rest of day, ground bare, water open; temp. 31 F to 48 F; wind NW, 5 mph. Thirty-eight observers in 9 parties. Total party-hours, 62.75 (17.75 by car, 45 on foot); total party-miles, 174.5 (149 by car, 25.5 on foot). **Total species, 77; total individuals, 10,159.**—Mrs. John Andrews, Mrs. Mary Bishir, Bobby Bishir, Carol Bishir, Patricia Bishir, Mrs. F.H. Brant, Mrs. C.I. Bryan, C.I. Bryan, J.W. Chalfant, Mrs. William Clary, John Coxe, Mrs. Ann Davis, Mrs. Charlotte Green, Mrs. Z.B. Green, James F. Green, Mrs. William Hatheway, William Hatheway, Samuel Hoshour, Mrs. Robert Jackson, Miss Mabel Jones, Mrs. Charles Kistler, Mrs. John Lamson, John Lamson, Stephen Maddock, Mrs. Stephen Maddock, Edmund LeGrand, Harry LeGrand Jr., Mr. Paul, Mrs. Tom Quay, Mrs. Charles Richardson, Mrs. Edith Shanklin, Mrs. Mary Showalter, Mrs. Gwenn Turbeville, Mrs. Elizabeth Watson, Mrs. David Wray, D.L. Wray (compiler).

Rocky Mount, N.C. (all points within a 15-mile diameter circle centered at Battleboro, to include Rocky Mount, Tar River, Swift Creek, Fishing Creek, Braswell's, Horne, Bryan, Watson, Anderson ponds, Battle Park and Old Town Farm).—31 Dec.; 5:00 AM to 6:00 PM. Cloudy, intermittent sleet and rain; temp. 28 F to 41 F; wind NE, 5-10 mph. Four observers in 1 party, 4 individuals working own yards. Total party-hours, 44 (35 by car, 9 on foot); total party-miles, 254 (240 by car, 14 on foot). **Total species, 71; total individuals, 2,395.** **Whistling Swans** that have been reported on a previous count are semi-captive birds and should be deleted.—Joyce Bennett, Stephen Bennett III, Betty N. Davis, Steve Howell, Carr Speight, Sarah Speight, John L. Thompson (compiler), Mary Louise Warner.

Stanly County, N.C. (all points within a 15-mile diameter circle centered about 2 miles NW of Badin).—29 Dec.; 6:30 AM to 6:00 PM. Fair and cold; temp. 27 F to 46 F; wind NW, 10 mph. Seventeen observers in 8 parties, 16 individuals working own yards. Total party-hours, 73.5 (15.5 by car, 4 by boat, 54 on foot); total party-miles, 244 (201 by car, 14 by boat, 29 on foot). **Total species, 74; total individuals, 6,266.** **Pine Grosbeaks** (BM, MG), a pair together, plus another male at another location, were studied carefully as they fed in an ash tree, at a distance of about 35 or 40 feet. They were in the foothills of the Uharries, near Morrow Mountain State Park. The two observers are very familiar with Purple Finches and are sure the birds were Pine Grosbeaks as pictured and described in Peterson's field guide.—Roy Blalock, Erin Blalock, Margaret Crawley, Barrett Crook, Vera Crook (compiler), George Culp, Myrtle Culp, Nina Eudy, Joe Ferebee, Joey Foglia, Virginia Foglia, Mattie Gerig, Rudy Gerig, Louise Hammill, Gertrude Hartung, Louis Hartung, Lectie Harwood, Nelle Hinson, Myrtle Isenhour, Cindy Lowder, Fisher Maner, Doris Mauney, Annie Misenheimer, Paine Misenheimer, Bessie Morgan, Harold Morris, Ann Olsen, Francis Russell, Margaret Spear, Nana Swecker, Addie Thompson, Vivian Whitlock, Bennie Winget.

Wayne County, N.C. (all points within a 15-mile diameter circle centered at Indian Springs to include Seven Springs, Mt. Olive, Sleepy Creek Lake, Walnut Creek Lake and Cliffs of Neuse State Park).—30 Dec.; 7:00 AM to 5:00 PM. Clear; temp. 28 F to 37 F; wind 5-10 mph. Five observers in 1 party, 2 individuals working own yards. Total party-hours, 10 (8 by car, 2 on foot); total party-miles, 110 (108 by car, 2 on foot). **Total species, 72; total individuals, 2,371.** **White-crowned Sparrows** and **Yellow-breasted Chat** were in Margaret

Walker's yard. The chat was banded and was probably the same bird that was banded by the observer 3 years ago. The **Red-breasted Mergansers** were on Walnut Creek Lake.—Joyce Bennett, Mrs. Lloyd Davis, Margaret Davis, G.P. Nowlin, Jean Siler, R.H. (Sandy) Siler (compiler), Margaret Walker.

Wilmington, N.C. (all points within a 15-mile diameter circle centered at Myrtle Grove Junction).—30 Dec.; 5:00 AM to 6:00 PM. Clear in morning, partly cloudy in afternoon; temp. 31 F to 54 F; wind N, 6-10 mph. Twenty observers in 9 parties. Total party-hours, 95 (34 by car, 1 by boat, 60 on foot); total party-miles, 373 (312 by car, 10 by boat, 61 on foot). **Total species, 155; total individuals, 50,743.** **Ground Dove** (DE, FN) was closely studied on Harbor Island. **Yellow-billed Cuckoo** (KA, MU) was closely studied at Wrightsville Sound. **Black-and-white Warbler** (JFP, RT) was at Orton Plantation. **Short-eared Owl** was seen by DB and MB.—Katharine Alexander, Edna Appleberry, David Barnes, Maurice Barnhill, Geneva Dyches, Dot Earle (compiler), Gilbert Grant, Bill Green, Harry Latimer III, Greg Massey, Billy McEachern, Polly Mebane, Frances Needham, James F. Parnell, Eloise Potter, Jack Potter, Julia Shepard, Elizabeth Teulings, Robert Teulings, Mary Urich.

Winston-Salem, Forsyth County, N.C. (all points within a 15-mile diameter circle centered at Silas Creek Pkwy and Interstate 40 as in previous years).—30 Dec.; 5:30 AM to 5:00 PM. Clear to partly cloudy; temp. 15 F to 38 F; wind W, 0-5 mph. Twenty-four observers in 8 parties, 3 individuals working own yards. Total party-hours, 64 (10 by car, 54 on foot); total party-miles, 330 (298 by car, 32 on foot). **Total species, 81; total individuals, 10,666.** **Oldsquaws**, two females, were in different localities (MV, ET); one wounded bird was collected by Myron Vourax, curator of Nature Science Center. **Bonaparte's Gull** (CRH et al.) was studied in 40x scope at Salem Lake with all marks noted. Two **Baltimore Orioles** (RH) have been at feeder since 6 November. Two **Chipping Sparrows** were closely observed by RS and party. Unusually large numbers of **Robins** were mostly flying north in flocks. Unusually large numbers of **Cedar Waxwings** were mostly noted in two large flocks.—Diane Cowherd, Yelverton Cowherd, John Davis, Velma Davis, Charles Frost, Gardner Gidley, Gary Gidley, Margaret Gidley, Fred Hill, Page Hill, Ruth Hill, C. Royce Hough (compiler), Dwight Lee, Pollyanna Lee, Barbara Page, Joe Pearson, Temple Pearson, Jackie Shelton, Ramona Snively, Edith Spinks, Edward Thompson, Myron Vourax, Robert Witherington, Robert Witherington Jr.

CONSERVATION

(Continued from page 8)

3. they provide a calm settling chamber for air pollutants.
4. they introduce good clean oxygen into the air.
5. moisture on and around plants washes polluted air as it drifts past.
6. they replace fumes with the pleasant and clean odors of trees and flowers.

These are six more obvious reasons to protect and plant trees. Let's make Arbor Day a national holiday!

CBC RECORDS COMMITTEE REPORT

The Carolina Bird Club Records Committee agrees with most authorities that the preferred method of documenting the occurrence of a new species in a given geographic area is by the procurement of a specimen. However, realizing that many people are opposed to collecting and that certain endangered species cannot be collected legally, the committee lists below two additional means of documenting first records of birds in the Carolinas. These criteria are given not to keep the committee members from having to make subjective decisions, but rather to protect from criticism those club members who are fortunate enough to find a rare bird or a common species in aberrant plumage. We fully realize that any committee can be deceived by false evidence. Also, conscientious observers may find birds that have been transported by someone else and released far outside normal ranges, such as escaped caged birds. Thus neither a skin, nor an excellent photograph, nor any number of reliable witnesses can relieve this committee of responsibility for evaluating the circumstances under which each new species is found.

1. *Specimen.* The customary and most widely accepted means of documenting a first record of a species in a given geographic area is by depositing a specimen in the scientific collections of a museum or other educational institution. This allows identification by subspecies, permits examination for abnormalities, provides comparative materials for a wide variety of ornithological research projects, and insures acceptance of the record by future generations of ornithologists.

2. *Photographs.* Modern photographic techniques are so widely practiced among bird students that many records can be established by publication of photographs showing diagnostic field marks. Particularly useful in this respect are photographs of the bird in hand after capture for banding purposes.

3. *Multiple sight records.* Three independent sight records by two or more observers deemed competent by the committee members will also be considered adequate evidence of the occurrence of certain species within the Carolinas. This method is offered primarily to accommodate careful sight records of species relatively easy to identify in the field but which cannot be collected legally or do not remain in one place long enough to permit photographing or collecting.

Apparently valid records not meeting these criteria will be admitted to the "hypothetical" list to await confirmation. It will be noted that some species, such as the *Empidonax* flycatchers, can be added to the state list only when a specimen has been critically identified by a competent authority who has access to adequate comparative specimens.

All three criteria presuppose publication of a coherent account of the occurrence in a reputable ornithological journal, such as *Auk*, *Wilson Bulletin*, or *Chat*; thus the pertinent details will be a matter of public record. While it is the responsibility of each person to arrange for publication of his observations, the CBC Records Committee members will gladly provide advice and assistance upon request.

Respectfully submitted,
Eloise F. Potter, Editor, *The Chat*
James F. Parnell, Chairman for North Carolina
B. Rhett Chamberlain, Chairman for South Carolina (deceased)
E. Burnham Chamberlain
Thomas L. Quay

General Field Notes

JAMES F. PARNELL, *Department Editor*
Department of Biology, Wilmington College, Wilmington, N.C.

Immature Red-breasted Merganser at Wrightsville Beach, N.C.—On 28 June 1967, a young duck, identified as a merganser from the long, slender, orange-red bill, was seen in a small salt marsh creek near the southern end of Wrightsville Beach, N.C. During July and August presumably the same bird was seen on at least four different occasions.

When first seen on 28 July the young bird appeared to be fluffy with down feathers. It could not fly when approached, but took to the water and quickly hid among the salt marsh grasses. About the middle of July a young merganser was again seen in the same creek and again took to the marsh to hide. During July it was seen swimming near this creek, but no effort was made to approach it. The first week of August the young bird was seen at the water's edge of a near-by island. This time when approached it flew rather clumsily for a short distance, landed on the water, and swam rapidly away. At this time it appeared to have the brownish plumage of a female Red-breasted Merganser. All down feathers appeared to have been replaced by this time.

No adult mergansers were seen in the area during this time although adult females have been seen here during the summer of recent years. *Birds of North Carolina* states that adult birds are not uncommon all along the North Carolina coast during the summer, but does not mention any records of young or nesting. Bent (*Life Histories of North American Birds*) lists the breeding range as no further south than New York state.—FRANCES NEEDHAM, *Box 81, Wilmington, N.C.*

Two Sight Records of the Rough-legged Hawk in North Carolina.—An apparently mature Rough-legged Hawk (*Buteo lagopus*) in the dark phase was observed flying over the beach dunes about 3 miles north of Oregon Inlet, Dare County, N.C., 28 December 1967, at 10:30 AM. The general aspect was that of an all-black *Buteo*, somewhat lighter in color on the primaries, and slightly larger in outline than a Red-tailed Hawk. The flight habit was in some respects more crow-like than buteonine, and the pattern of intermittent flying and hovering, sometimes with the legs extended, was diagnostic. I am reasonably familiar with this species, having observed a number of individuals, sometimes at very close range, in the Sacramento Valley of California. The Rough-legged Hawk is a rare and irregular winter visitor and transient in the Carolinas (*Chat*, 23:35; 30:50-51, 107-108).

The second Rough-legged, a typically light-phase bird, was seen near the E.V. Combs School within the city limits of Raleigh, 15 January 1968, at approximately 12:45 PM. The day was clear, windy, and cold. The bird was sighted from approximately $\frac{1}{2}$ mile away and tentatively identified as this species by the characteristic flight pattern. I was able to approach close enough to confirm the record, that is to say within about 400 feet of the flying bird. The head, chest, and tail were largely white, or so it appeared at the distance. The wings were mostly white and there were conspicuous black markings at the angle of the wing and on the belly. This bird hovered several times over an open field and eventually flew away to the south.

The Rough-legged Hawk in general is easily distinguished from local buteos by the combination of flight habits and size. It soars less than the Red-tail and

appears to be much more agile awing. If hunting, the hovering posture is spectacular and diagnostic. It is somewhat larger than either the Red-shouldered Hawk or the Marsh Hawk, and the wings appear to be longer and more slender than in the Red-tailed Hawk. It should be looked for in open areas. It is usually more active at dawn and dusk than in the middle of the day.—JOSHUA A. LEE, 5104 Newcastle Road, Raleigh, N.C., 15 January 1968.

Black-headed Gull at Ft. Macon, N.C.—On 10 August 1967 at about 9:00 AM Elizabeth Ball and I were able to study closely a Black-headed Gull (*Larus ridibundus*) on the beach at the point of Ft. Macon, N.C. Because of the head markings, I thought, at first, that it was a Bonaparte's Gull, but Betty had seen these birds before in Massachusetts and recognized it for the rarity it was here.

The gull was studied at distances of less than 50 feet with telescope and binoculars. All field marks were checked against Peterson (*Field Guide to Eastern Birds*), Pough (*Audubon Water Bird Guide*), and Robbins et al. (*Birds of North America*). The very light mantle, large red bill, and red legs separated it clearly from the Bonaparte's Gull. After all standing field marks were verified, we flushed the bird and it flew overhead for about 2 minutes. The sooty look of the under surface of the primaries and the light front wing feathers showed plainly.

On 22 August Margaret Conderman and I returned and were able to follow the bird (presumably the same one) along the beach and approach it very closely, again identifying all field marks at our leisure. We had to approach very close to flush the bird, and the leading edge of the wing was very light, if not completely white, as mentioned in the *Birds of Britain and Europe*. The tip of the bill seemed to have become darker than on first observation.—GERALDINE COX, Route 1, Box 26, Bayboro, N.C.

[This is the first documented record of the Black-headed Gull in North Carolina. Further confirmation of the above record was provided by Mrs. Margaret Conderman and Dr. Robert Holmes. Both fully agree with the above identification. The bird was not collected nor were photographs obtained. Thus, the Black-headed Gull will be placed on the hypothetical list until conditions for being placed on the official list are completed.—DEPT. ED.]

Eastern Bluebirds Attract Fall Migrants.—Our home is located on a wooded hillside immediately adjoining the Zebulon Country Club, 3.5 miles north of Zebulon, Wake County, N.C. Spaced about 200 feet apart on trees at the edge of the fairway are two bluebird nest boxes, one of which was occupied by Tufted Titmice and the other by Eastern Bluebirds in the spring and summer of 1967. Several boxes located along our driveway were visited by house-hunting bluebirds, but these were never actually occupied.

Three broods fledged from the single box occupied by bluebirds. Five young left the nest on 18 May and were fed flying ants all day by both parents. At 7:45 PM EDT the fledglings gathered on a drooping pine bough and appeared ready to go to sleep until a squirrel began climbing a sapling below them. Greatly excited, the male parent dived at the intruder repeatedly and successfully drove it away. Both adults remained on guard until the young had found another roosting place and continued feeding them until 8:10 PM EDT. Only three of these young bluebirds survived the first two weeks out of the nest box. One was found dead 21 May and another on 29 May. By the latter date the female had taken the survivors to the far corner of our 2.5-acre yard, and the male had acquired a new mate. The second female joined the flock on 23 May and immediately began carrying nesting materials into the box. This bird could be distinguished from the first mate by spots on her breast, indicating she had hatched late in the 1966 nesting season. The three young of this mating left the box on 7 July. By 23 July there were four eggs in the box, and four young

left the nest on 16 August. It was impossible to tell which female laid the third clutch since the second female had molted and lost her speckled breast.

Almost immediately after the third brood left the nest, the bluebirds formed a large and active flock. All day they could be heard calling to each other as they moved from the pokeweed (a favorite source of food), to the water sprinkler, to the grassy expanse of the fairway, to the stream across the fairway, to the utility wires, and back to the pokeweed. At dusk the bluebirds returned to the vicinity of the nest box to roost.

The bluebirds were usually accompanied on their daily rounds by Carolina Chickadees, Tufted Titmice, Brown-headed Nuthatches, Red-eyed Vireos, Pine Warblers, and Chipping Sparrows. It was not until 1 October that I noticed a stranger in their midst, a Black-throated Green Warbler. On 2 October a Nashville Warbler joined the flock, but it seemed to be interested in the Chipping Sparrows more than the bluebirds. On 3 October the bluebirds attracted a Ruby-crowned Kinglet, Magnolia Warbler, Myrtle Warbler, many migrant Pine Warblers, a Wilson's Warbler, and an American Redstart. The Magnolia Warbler, Wilson's Warbler, and American Redstart joined the flock individually and departed together after feeding among the pokeweeds, not to be seen again with the bluebirds. On 6 October there was a Blackburnian Warbler with the flock briefly. Palm Warblers joined the flock on 9 and 20 October and 21 November, the November bird being a "western" Palm Warbler. A Solitary Vireo was seen in the flock on 11 and 20 October. On 12 October there was a huge influx of Myrtle Warblers, and throughout the remaining weeks of fall migration many of these were associated with the bluebirds. The flock reached its greatest size on 20 October when an estimated 200 birds of various species followed the bluebirds around the yard part of the morning.

The temporary association of migrants, particularly lone birds, with resident bluebirds offers obvious advantages for the newcomers in locating food and water and in being warned of danger by the behavior of the flock. Many observers have commented on the conspicuousness of Eastern Bluebird flocks in the fall of the year. Some people even call October "bluebird weather." In Bent's *Life Histories of North American Thrushes, Kinglets, and Their Allies*, p. 254, W.M. Tyler describes the Myrtle Warbler as the "bluebird's shadow at this season." Others have noted the association of Robins and Horned Larks with Eastern Bluebirds after the nesting season as well as that of Myrtle, Pine, and Palm Warblers with them on the wintering grounds. However, nowhere in the literature have I found an account describing the wide variety of migrants attracted by the bluebirds in my yard during the fall of 1967.

After the pokeweed plants were killed by cold weather, the bluebirds dispersed, allowing me no opportunity to study their winter behavior. I would occasionally see one or two of my banded birds pass through the yard, but they seemed to spend most of their time on wires along the highway rather than on perches overlooking the golf course. It was not until the first week of March that they returned to the yard and again filled the air with their calls from dawn to dusk. —ELOISE F. POTTER, Box 277, Zebulon, N.C., 11 March 1968.

Briefs for the Files

Compiled by JAMES F. PARNELL
(All Dates 1967)

- Common Loon**—One was seen near Raleigh, N.C., on Lake Wheeler on 25 November and 2 December by Robert Hader.
- Greater Shearwater**—Approximately 60 were seen about 15 miles off Morehead City, N.C., on 5 August, Harry LeGrande.
- Anhinga**—Two remained at Magnolia Gardens, Charleston, S.C., as late as 2 December, Ted Beckett.
- Louisiana Heron**—One was at Columbia, S.C., as late as 1 November when seen by Mrs. Ellison Smith.
- Cattle Egret**—Single birds were found at Raleigh by Robert Hader and at High Point, N.C., by James Mattocks on 7 October.
- Blue-winged Teal**—Two were late at Raleigh on 19 November, Robert Hader.
- Whistling Swan**—A single bird was seen at Lake Wheeler near Raleigh on 19 November by Mike Browne and Robert Hader.
- Red-breasted Merganser**—One was seen at Raleigh on 11 November by Robert Hader. Five were seen at Raleigh on 26 November by Dale Lewis and Darryl Moffett.
- Peregrine Falcon**—One was seen at High Point on 11 October by James Mattocks. Single birds were also seen at Ocracoke Island, N.C., on 30 September by Lee Jones and at Magnolia Gardens on 18 November by Ted Beckett.
- Pigeon Hawk**—One was found at North Wilkesboro, N.C., on 3 November by Wendell Smith. Six were seen at Pea Island, N.C., on 11 November by Lee Jones and Dale Lewis, and 4 were found there on 18 November by Lee Jones, Mike Browne, and Dale Lewis. Two were at Magnolia Gardens on 1 November, Ted Beckett.
- Osprey**—A single bird at High Point on 8 November was late, James Mattocks.
- American Golden Plover**—One was seen at Cape Hatteras, N.C., on 12 August by Geraldine Cox and Elizabeth Ball. They were seen regularly at High Point from 20 September to 22 October. Seven were seen there on 7 October, James Mattocks.
- Upland Plover**—These birds were found to be unusually abundant throughout the fall in the vicinity of Beaufort, N.C. Eugene Pond reported 25 to 30 individuals there during the fall.
- Purple Sandpiper**—One was found at Folly Island near Charleston on 22 November by Bruce Mack.
- Pectoral Sandpiper**—These birds were found in small numbers until late October at High Point, James Mattocks. One was found at Raleigh as late as 2 December, Robert Hader.
- White-rumped Sandpiper**—One was seen at the Pea Island National Wildlife Refuge on 1 October by Lee Jones.
- Baird's Sandpiper**—Two were found at High Point on 9 September by James Mattocks.
- Dunlin**—One was seen at Raleigh on 21 October by Lee Jones. Robert Hader found one there between 5 and 11 November and three on 25 November. Sixteen were found on 4 November at High Point with nine remaining there until 11 November, James Mattocks.
- Hudsonian Godwit**—Three birds were found on Bodie Island at the Cape Hatteras National Seashore on 5 and 6 October by James Pullman.

- Long-billed Curlew**—One was seen in Oregon Inlet at the Cape Hatteras Park on 8 October by James Pullman.
- Sanderling**—Ten were found inland at High Point on 8 September by James Mattocks.
- American Avocet**—A very large flock of approximately 240 birds was seen at Bodie Island on 1 October by Lee Jones. Two were collected on the lower Cape Fear River near Ft. Fisher, N.C., on 10 December by James Parnell.
- Red Phalarope**—One was found in Hatteras Inlet near Hatteras Village on 30 September by Lee Jones.
- Parasitic Jaeger**—Two were seen near the Virginia border on the “outer banks” of North Carolina on 1 November and two at Oregon Inlet on 11 November by Paul Buckley.
- Pomerine Jaeger**—Seven were at Oregon Inlet on 11 November, Paul Buckley.
- Black Tern**—Single individuals appeared inland at Southern Pines, N.C., on 10 September, Jay Carter, and at Raleigh on 28 October, Robert Hader.
- Gull-billed Tern**—Three were seen at Raleigh on 4 September and one on 7 October by Mike Browne.
- Sandwich Tern**—An unusually large flock of 61 was found at Wrightsville Beach, N.C., on 25 November by Maurice Barnhill.
- Ground Dove**—Several were found north of their usual range. One was at Beaufort, N.C., on 10 October, Eugene Pond; and one was found at Topsail Beach, N.C., on 1 October, Fred Hill. On 29 October a single bird was found at Wrightsville Beach by Eloise Potter and Elizabeth Teulings, and on 24 December James Pullman found one at Ft. Fisher. Inland a Ground Dove was at Eastover, S.C., on 5 September, A.R. Faver.
- Saw-whet Owl**—One was banded on 15 October at the Pea Island National Wildlife Refuge by Henry Haberyan.
- Red-breasted Nuthatch**—The only fall report was of a single individual at North Wilkesboro on 12 October, Wendell Smith.
- Red-eyed Vireo**—One was late at Raleigh on 4 November, Robert Hader.
- Philadelphia Vireo**—One was seen on 1 October at Pea Island by Lee Jones. One was at Southern Pines on 25 September, Jay Carter.
- Worm-eating Warbler**—One was found on Bodie Island on 1 October by Lee Jones, and one was seen at Magnolia Gardens on 30 September by Ted Beckett.
- Tennessee Warbler**—A single bird was found at Pea Island on 13 October by Henry Haberyan.
- Nashville Warbler**—Two were banded on 13 October at Pea Island by Henry Haberyan.
- Magnolia Warbler**—One was banded at Pea Island on 13 October by Henry Haberyan.
- Blackburnian Warbler**—Two were seen at Pea Island on 1 October by Lee Jones.
- Connecticut Warbler**—One was studied carefully at Garden City, S.C., on 22 September by Mrs. Ellison Smith.
- Rose-breasted Grosbeak**—One was late in Kershaw County, S.C., on 30 November, Mrs. Ellison Smith.
- Evening Grosbeak**—Four were found at Raleigh on 23 September by Dale Lewis, and a small flock was found at Anderson, S.C., on 16 October by Adair Tedards. No other reports were received.
- Dickcissel**—Five were seen at Raleigh on 24 September by Dale Lewis and Darryl Moffett. One was found at Anderson from 8 to 10 November by Adair

Tedards, and an immature bird was found at Magnolia Gardens on 3 December by Ted Beckett.

Ipswich Sparrow—One was found near Charleston on Folly Island on 22 November by Bruce Mack.

Lark Sparrow—One was seen at North Wilkesboro on 28 October and 2 November by Wendell Smith, and one was found at Magnolia Gardens on 20 October by Ted Beckett.

Tree Sparrow—One was seen near Raleigh on 24 November by Dale Lewis.

Clay-colored Sparrow—Two were seen on Cedar Island in Carteret County, N.C., on 30 September by Lee Jones.

Lincoln's Sparrow—One was found by Wendell Smith on 17 October at North Wilkesboro. On 21 October a single bird was found at Raleigh by Robert Hader, and two were found at Chapel Hill, N.C., by Robert and Elizabeth Teulings.

NEWS AND COMMENTS

Birds of the Southern Appalachians

Compiled by E. Burnham Chamberlain, Emeritus Curator of the Charleston Museum, *Birds of the Southern Appalachians* is an attractive and valuable annotated list of the species occurring in the Appalachians from Maryland and West Virginia south to Alabama and Georgia. Copies may be obtained by request from the following address: Forest Supervisor, National Forests in North Carolina, Plateau Building, 50 South Broad, Asheville, N.C. 28802.

Birds of the Francis Marion National Forest

Also compiled by E. Burnham Chamberlain, *Birds of the Francis Marion National Forest* is of less general interest than the companion book on the Southern Appalachians. However, anyone living in South Carolina or planning to visit there will want to obtain a copy by writing Forest Supervisor, National Forests in South Carolina, 1813 Main Street, Columbia, S.C. 29201.

Checklists for Travelers

Two checklists designed to meet the needs of traveling bird watchers are available from James A. Tucker, Box 157, Maitland, Florida 32751. The *Combination List for Birds of North America* has for each species a place to record the date and place first seen, local migration, year lists, and state-by-state lists. These various headings are arranged on full and half-size pages so that one species list serves the various types of data. Copies retail for \$2.00 each with a 25% discount on orders of a dozen or more. The *Traveler's List and Checklist for Birds of North America* is smaller, less versatile, and less expensive. It would probably be adequate for listing birds seen on a two-week trip. Copies sell for 35¢ each (3 for \$1) with a 25% discount on orders of 30 or more.

Chat to be Listed in Biological Abstracts

Beginning with Volume 31 (1967), scientific papers and notes appearing in *Chat* will be abstracted and indexed by BioSciences Information Service of *Biological Abstracts*. Listing of *Chat* articles in this basic reference to bioscience serial publications is well deserved recognition of the competence demonstrated by our contributors.

BOOK REVIEW

BIOLOGY OF BIRDS by Wesley Lanyon, Garden City, New York: The Natural History Press, 1963. 186 p. illus. hardback \$3.95. paperback \$1.25.

The purpose of this excellent little book is clearly set forth in the author's preface: "It is in response to the need for an inexpensive, non-technical presentation of the principles of avian biology that this book has been written. . . . an effort has been made to provide the lay reader with the basis for an understanding of the principles of avian biology and for an appreciation of the great diversity of structure and behavior among birds." All too often an initiate in ornithology becomes either overwhelmed and discouraged or just plain bored when a well-intentioned veteran hands him a copy of the typical college level textbook in avian biology. These works assume a broad biological background; and their exhaustive footnotes, technical jargon, and frequently awkward style are virtually guaranteed to squelch the enthusiasm of most aspiring naturalists. Lanyon skillfully avoids these pitfalls and writes with clarity, brevity, and grace of style without sacrificing the scientific accuracy and soundness of the book.

The first chapter presents the origins, paleontology, and evolution of birds accompanied by drawings of Archaeopteryx, Diatryma, Hesperornis, and the Moa and a chart showing the evolution of birds through the geological periods. This is followed by a thorough discussion of the principles of avian anatomy and the design for flight, each of which is illustrated by attractive drawings. Subsequent chapters deal with classification, plumage, adaptation, physiology, migration, navigation, distribution, courtship, reproduction, growth, and survival. Over 60 drawings and charts accompany the text, and each illustration is designed to clarify a key point in the chapter.

With its clear and concise discussion of the broad principles of avian biology, *Biology of Birds* should be on the shelves of every high school science library; and it is highly recommended for anyone desiring to move past the stage of bird listing.—MARK SIMPSON JR.



Founded 6 March 1937

Incorporated 8 August 1949

Carolina Bird Club is an incorporated association for the study and conservation of wildlife, particularly birds, chiefly in the Carolinas. Founded in 1937 as the North Carolina Bird Club, it was joined in 1948 by several South Carolina natural history clubs and the name changed to the Carolina Bird Club.

MEMBERSHIP

The Carolina Bird Club, Inc., is a non-profit educational and scientific organization. Dues, contributions and bequests to the club are deductible from State and Federal income and estate taxes. Membership is open to anyone interested in birds, natural history and conservation. The several classes of membership are listed below. Checks should be made payable to Carolina Bird Club, Inc., and sent to CBC Headquarters, Box 1220, Tryon, N.C. 28782.

Regular Membership	\$ 2.00
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Contributing Membership	\$ 25.00
Life Membership	\$100.00
(Payable in four consecutive annual installments.)	
Student Membership	\$ 1.00
Affiliated Club	\$ 2.00

THE CHAT

The Chat, as the official bulletin of Carolina Bird Club, Inc., is published quarterly in March, June, September and December. All members not in arrears for dues receive *The Chat*. Correspondence concerning memberships, changes of address and back numbers should be sent to CBC Headquarters, P.O. Box 1220, Tryon, N.C. 28782. Please notify Headquarters immediately of change of address.

All papers, census reports and notices for publication in *The Chat* should be sent directly to the Editor. However, items intended for the General Field Notes, Backyard Birding, or Conservation departments should be sent to the respective department editors.

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The Chat

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The Chat

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Editor	Eloise F. Potter, Box 277, Zebulon, N.C.
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OUR COVER—American Woodcock as photographed by Joel Arrington, courtesy of N.C. Department of Conservation and Development.

HIGH ALTITUDE OCCURRENCES OF THE AMERICAN WOODCOCK IN WESTERN NORTH CAROLINA

MARK SIMPSON JR.

Although the American Woodcock (*Philohela minor*) has been recorded throughout North Carolina during the breeding season, reports of its occurrence from western counties are infrequent. Furthermore, the majority of these observations are from the low-lying valleys, with no evidence that the bird occurs regularly in regions of high, mountainous terrain. Pearson, Brimley, and Brimley (1959) give the status of the woodcock as "whole State in all seasons;" but no specific mention is made of records from western North Carolina. Critcher and Quay (1953) list a number of records from Transylvania, Henderson, Burke, and Buncombe Counties; but close examination reveals that these observations are confined to the lower elevations. The only published records of high altitude occurrences for the woodcock are by Stupka (1963), who lists four such reports of single birds on Heintooga Bald (5,150 feet), Cosby Knob (5,000 feet), Clingman's Dome Road (5,400 feet), and along the transmountain road (4,850 feet) in the Great Smoky Mountains.

During March, April, and May 1968, I observed a number of American Woodcock in high altitude regions in six of the major mountain ranges of North Carolina. At this time I was conducting a Saw-whet Owl census in the spruce-fir zone, stopping every .2 mile along suitable stretches of highway. These records are based on observation of the call notes and courtship territory songs of the male woodcock. Two notes are uttered on the courtship territory between flights: a loud, rasping, nasal *peent* and a soft, low *tuko*. There are two flight songs: a twittering whistle delivered during the upward spiral flight and a similar twittering interspersed with loud chirps during the downward flight. These vocalizations have been described in detail by Wade (1957), while Critcher and Quay (1953) report that the "only adequate census technique for woodcock centers around the courtship performance." Observations of these courtship performances form the basis for the following records.

OBSERVATIONS

Great Smoky Mountains—Swain County

Indian Gap—5,266 feet

27 March: One bird was observed in flight and heard giving the typical twittering flight song at 10:30 P.M.

Roan Mountain—Mitchell County

Carver's Gap—5,512 feet

13 April: The *peent* notes and twittering flight song of a single bird were heard at 7:50 P.M. Charles Smith (personal communication) informs me that he has also recorded the woodcock at Carver's Gap during the spring months several years ago.

Pisgah Ridge—Haywood County

Pisgah Inn—4,900 feet

11 May: The *peent* notes of a single bird were heard from 1:00 A.M. to 1:30 A.M. and again from 6:00 A.M. to 6:45 A.M. in the campground across the Blue Ridge Parkway from Pisgah Inn.

Plott Balsam Mountains—Jackson County

Waterrock Knob—5,820 feet

10 May: The *peent* notes and twittering flight song of a single bird were heard at the parking lot at 9:30 P.M.

Black Mountains—Yancey County

Mt. Mitchell—6,200 feet

3 May: The *peent* notes and twittering flight song of a single bird were recorded on tape by Vaud Travis after I had located the bird at the restaurant parking lot at 10:45 P.M. During a five year study period on Mt. Mitchell, Burleigh (1941) did not detect the woodcock, although Cairns (1889) lists the bird as breeding in Buncombe County in April. However, a close examination of Cairns' paper reveals that these records probably came from low altitudes, since he invariably annotated his high altitude observations. To my knowledge, this is the highest elevation at which the woodcock has been recorded in North Carolina.

Great Balsam Mountains—Jackson County

Tanasee Bald—5,300 feet

11 April: The twittering flight song and *peent* notes of two birds were heard at 9:15 P.M. at the parking lot.

12 April: A single bird was seen and heard at the parking lot at 7:30 P.M.

10 May: Two birds were heard giving the *peent* notes, while the flight song was heard repeatedly at 11:00 P.M.

Herrin Knob—5,400 feet

11 April: Two different birds were heard giving *peent* notes and flight songs at 9:45 P.M. These vocalizations were recorded on tape at this site.

Bear Trail Ridge—5,865 feet

11 April: Two different birds were heard giving *peent* notes and the flight song at 11:00 P.M.

10 May: Two different birds were heard giving *peent* notes and the flight song at 10:00 P.M.

Richland Balsam—6,040 feet

10 May: Two different birds were heard giving *peent* notes and the flight song at 10:15 P.M. Prior to 1967, Richard Peake (personal communication) spent many evenings on this mountain studying the Saw-whet Owl; but no evidence of woodcock presence was ever noted.

WEATHER

Weather conditions on the above mentioned nights of observation were as follows.

27 March: cold, clear, calm, no moon.

11 April: cold, clear, calm, full moon.

12 April: cold, clear, 5-10 mph wind from south, full moon, total eclipse.

13 April: cool, scattered clouds, 5-10 mph wind from south, full moon.

3 May: cold, clear, 10-15 mph wind from south, no moon.

10 May: cool, clear, 5 mph wind from south, full moon.

11 May: cool, cloudy, rain during early morning hours.

ECOLOGY

The ecological situation for the above records follows a consistent and significant pattern. The woodcock is most commonly found around the parking lots and large overlooks along the Blue Ridge Parkway and other similar mountain roads. Immediately adjacent to the road surface, the vegetation consists of low grasses and other herbaceous plants. Farther from the road and peripheral to these grassy areas, the growth of low, woody shrubs becomes prominent, with rhododendron, pin cherry, hobblebush, and similar species present. At varying distances from the road, the transition occurs from low shrubs to mature forest, which usually consists of Fraser fir (*Abies fraseri*) and red spruce (*Picea rubra*).

DISCUSSION

On the basis of the above records, altitude does not appear to be a major limiting factor in the distribution of the American Woodcock. The lowest elevation included in these observations is 4,900 feet, with the majority of the records ranging from 5,500 feet to 6,200 feet. Therefore, other factors must be more significant in habitat selection by the woodcock.

I believe that one of the most important of these factors is the availability of suitable display territories for the male's aerial courtship behavior. A similar view has been proposed by Sheldon (1967), who states that the single vital factor in woodcock survival is competition for breeding and courtship sites. The male requires a distinctive ecological situation for his singing grounds, one in which the cover consists of scattered woody plants in the early stages of succession. According to Blankenship (1957), the optimum conditions consist of such woody plants at a height of 1 to 2 feet with adjacent areas of low, herbaceous species to serve as the actual alighting spot between courtship flights. Another critical factor in singing ground selection is the height of the trees surrounding the territory. As Sheldon (1967) has pointed out, the one essential requirement is a "get away" route for the male's take off flight. The woodcock begins his upward spiral flight with a sudden flush, during which time he flies for some 15 to 20 yards at heights below 10 feet. Once he has gained sufficient altitude and momentum, the male then begins his upward spiral flight, accompanied by the unique twittering and chirping calls. Because of this long and low take off flight, high surrounding trees may severely limit the usefulness of an otherwise ideal display territory. Maxfield (1961) concluded that the size of the display territory varies directly with the height of the surrounding trees: higher peripheral vegetation necessitates a larger take off area.

Because of the nature of plant succession, the usefulness of display territories is rather brief. Marshall (1958) determined that woodcock will abandon a territory as soon as 60% of the woody vegetation in the area reaches a height of 6 to 10 feet. Most sites, therefore, are transitory in nature; and unless the vegetation is cut back periodically by man, the woodcock will abandon them in the later stages of succession. In fact, Sheldon (1967) believes that practically all display territories presently in use were created either indirectly or directly by man.

With these facts in mind, a simple hypothesis may account for the apparently recent influx of woodcock into the higher elevations. It is my belief that alterations in the habitat, primarily due to the development of the Blue Ridge Parkway, have created ideal display territories and guaranteed their perpetuation from year to year. An examination of the plant life along the Parkway, particularly in the region of parking lots and overlooks, reveals the existence of every critical factor in the woodcock's selection of a display territory. There are sizable areas of low, woody plants which are surrounded by stretches of open, grassy terrain. Furthermore, the extensive open areas around these spots provide the woodcock with plenty of get away room for his flights. The Park Service maintains this situation in a static state by periodically cutting back the vegetation, thereby perpetuating these ideal display sites. My observations of woodcock behavior in the Great Balsam Mountains revealed that the bird frequently used these sites in a most interesting manner. Between flights, the males sat along the grassy shoulder of the Parkway at the edge of the adjacent woody border; and from this location they uttered their *peent* and *tuko* notes. Upon flushing, the males then used the Parkway itself for the get away route, with the open space above the pavement providing the optimum clearance from surrounding trees.

The hypothesis stated above helps to account for the fact that Cairns, Burleigh, and other early observers failed to detect the woodcock at these elevations. Clearings of this sort were virtually non-existent during Cairns'

lifetime; and the rapid, unimpeded succession of woody plants during Burleigh's explorations would quickly eliminate any suitable sites. Prior to my study, the only observations of woodcock at high altitudes came from regions where the ecological situation had been modified by man in a manner virtually identical to the present situation along the Blue Ridge Parkway. Stupka (1963) lists three such records, all of which came from cleared, cut-over areas around roads and overlooks in the Great Smoky Mountains National Park.

However, the woodcock's apparent absence from the natural grass balds is somewhat more difficult to explain. They may have been overlooked on these balds due to insufficient observation. The woodcock is notoriously difficult to detect, and its presence is most frequently noted by its courtship flight song and call notes. Such calling takes place primarily after evening twilight, a time when few ornithologists are afoot on these isolated and rugged peaks. Stupka (1963) mentions Wetmore's observation of a single bird on Cosby Knob on 19 June 1937; and this appears to be the only published, high altitude record of the woodcock from a region constituting a natural opening in the forest cover. Furthermore, the true grass balds rarely have any significant amount of low, shrubby vegetation; the open, grassy areas frequently extend up to the forest edge. Thus many of these peaks lack one of the essential elements in the woodcock's requirements for courtship territories: large areas of low, woody plants in the early stages of succession. Although the heath balds possess low, woody species, they form such a dense tangle of cover that the woodcock would probably find them unsuitable for display sites.

Additional questions are raised by the apparent association between the woodcock and the Canadian zone. As noted above, all display territories which I observed were immediately adjacent to forests of spruce and fir. Although most of my field work was confined to this habitat, the correlation between these coniferous forests and the woodcock may be significant. The extreme moisture of the soil combines with the sparse ground vegetation to provide a situation which superficially appears to be ideal for woodcock feeding habits. However, Arthur Stupka (personal communication) points out that this soil is quite thin, with a layer of rock immediately below the shallow surface. It is unlikely that the woodcock would be able to utilize this rocky, sparse soil in foraging for earthworms. A more probable explanation is based on the woodcock's choice of nesting sites. Sheldon (1967) found that one of the preferred habitats for nest building in Massachusetts is the coniferous forests of spruce and fir. The only way to determine the exact situation in the North Carolina mountains is by additional field work in adjacent regions where spruce and fir are absent.

Normally, the woodcock engages in courtship behavior and singing only during twilight, with most activity limited to the hour following sunset or preceding dawn. The above records reveal that a number of birds were calling at very late hours. However, with the exceptions of the Mt. Mitchell and Indian Gap records, all late calling was on moonlit nights. Sheldon (1967) mentions that woodcock will frequently sing throughout the night when a bright moon is present, and this lunar effect was probably responsible for the numerous late calling records.

Although census techniques for the woodcock center around the courtship flight and song, Critcher and Quay (1953) have pointed out that the presence of singing males is no guarantee of female presence or nesting. If this high altitude population represents a recent influx of males due to habitat changes, then the assumption that nesting is taking place is questionable. Conclusive evidence that this is a breeding population must rest on the eventual discovery of eggs or young.

SUMMARY

During the spring months of 1968, at least 13 different American Woodcock were recorded at elevations ranging from 4,900 feet to 6,200 feet. These birds were widely distributed through six of the major mountain ranges of North Carolina, and their presence was detected primarily by observation of the call notes and courtship flight songs. Altitudinal limitations are apparently non-existent for this species in our area; and its occurrence must be more closely related to other factors, particularly its behavioral requirements. Creation of static display territories by the Blue Ridge Parkway may help to account for this apparent influx of males. Additional work is needed to establish whether or not this high altitude population is actually breeding. Further research is also necessary to determine if the apparent correlation between spruce-fir forests and woodcock distribution is significant or merely accidental.

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Charlotte Country Day School, 1440 Carmel Road, Charlotte, N.C., 22 May 1968.

CONSERVATION

MAN AND HIS ENVIRONMENT

MARIE B. MELLINGER, *Department Editor*

Dr. Eugene Odum, pioneer in ecology, the science of environment, says "that an understanding of the environment, a study of man and nature, and how they work with each other will become one of the major keys in the ultimate question of survival." This is the new concept of man as part of his environment, one species among many that make up an ecological niche. Ken Morrison wrote, "a conservationist isn't a man who makes a speech, or writes a book, he's a man who lives in harmony with the land."

Yet so far, man has tipped and tilted the ecological balance in his own favor, and despoiled the land for his own purposes. He was given a wilderness and is busily making it into a desert. Only 10% of all land in the fifty states still remains as time has made it. From this 10%, small areas will be set aside under the Wilderness Act of 1964. But as Bob Haney, head of the Natural Areas Council for Georgia, said recently in a speech to the Georgia Ornithological Society, "we are saving bits and pieces and losing the whole."

And as long as there are men who do not or will not live at harmony with their environment, and do not see the purpose or importance of conservation practices, we need the books and the newspaper articles, and the voices crying out in protest. Abraham Lincoln said, "to sin by silence when they should protest makes cowards out of men."

WE NEED TO PROTEST AGAINST:

The bad manners of those who continue to litter our parks and recreation areas and pollute our streams. If each person took care of their own litter it would solve one great problem.

The continued use of DDT and other pesticides that destroy the balance of nature, and are exterminating our bird and animal life.

The continuing idiocy of those who think the problems of environmental pollution and lack of space will go away if we shut our eyes and refuse to talk or think about anything unpleasant.

The lack of adequate conservation education for ALL of our children.

The growing encroachment and exploitation of sea shore marshes, dunes, and estuaries affecting the natural chain of life from protozoa to man.

The governmental red tape and competition between agencies, often working at cross purposes. Trees are cut, river bottoms flooded, and mountains demolished, while agency heads argue over who is to do what.

Conservationists who are interested only in their own small pet projects and refuse to think or look beyond their own interests.

Birders who insist on keeping their bird organizations "only a bird club" and refuse to take any sort of stand on conservation issues. If we do not act soon, we will have no birding habitat and no birds!

* * * * *

In line with the above thinking, Mrs. Virginia Dennis was kind enough to help me compile a must list of summer reading.

Sand County Almanac, Aldo Leopold

From Eden to Sahara, Dr. J.K. Small

One Two Three Infinity, George Gamow
In Wilderness is the Preservation of the World, Elliott Porter
Silent Spring, Rachel Carson
The Quiet Crisis, Stewart Udall
The Frail Ocean, Wesley Marx
God's Own Junkyard
The Water Crisis, Senator Frank E. Moss
The Web of Life, Storer
Pesticides and the Living Landscape, Robert L. Rudd
Rivers, C. William Harrison
The Land and Wildlife of North America, Peter Farb
Wilderness in a Changing World, edited by Bruce M. Kilgore, Sierra Club

Charlotte Hilton Green Pleads: Save Umstead Park!

What is the William B. Umstead State Park (formerly Crabtree Park) that is now in the throes of controversy as to its future use—survival, rather?

Situated about 11 miles from Raleigh, 13 from Durham, a bit more from Chapel Hill—it is an area of 5,200 acres deeded to the State of North Carolina by the United States of America. "The State shall use the property exclusively for a public park, recreation and conservation purposes. Otherwise, it reverts to the federal government." It's as plain as that.

The danger threatening it? The Department of Conservation and Development of North Carolina proposes to sell—or trade—1,000 acres to the local Raleigh-Durham Airport for needed expansion, runways and such, perhaps receiving some 500 acres in exchange. The part the airport would be using would be some of its best sections and that in greatest use, regarding its original purpose. The new proposed plan calls for five man-made lakes for boating and fishing, horse stables, a golf course, swimming pools, out-door theater, band stand, exhibits—plus some 200 or so acres leased to private enterprises—which could set up commercial attractions. And Umstead would be well on the way to becoming an amusement park.

Remember, always Umstead was given to the State for conservation and recreation purposes.

And these uses? On the Sunday this is being written the Raleigh Bird Club had its annual spring picnic and field trip, with birders and naturalists taking to the trails. (Young David Hatheway was quite excited by the blue-tailed skink they had found, while older Harry LeGrand, the club's young bird "Hawk-Eye" who has already totaled a list of 110 species for the park, was off in hopes of "collecting" yet another species.)

Uses? Educational? Quoting Dr. Fred S. Barkalow, professor of zoology and forestry, North Carolina State University. "Five colleges (N.C. State, University of North Carolina, Duke, St. Augustine's and Shaw) conduct an assortment of activities, including classes, field excursions and research programs; furthermore, each year thousands of school children, scouts, 4-H and FFA youngsters assemble there for instruction in natural history by park naturalists, school teachers, and college personnel . . . gaining a knowledge of our natural environment, appreciation of natural beauty, and understanding of our basic relationship to earth and all its creatures." . . . (Has there ever been a time when youth needed nature's therapy more?)

As Director William Hamnett of the N.C. Museum of Natural History—with several others—points out: "With the 'population explosion' and the rapid growth of this area, within the next 10-15 years, Raleigh, Durham and Chapel Hill will almost be reaching the boundaries of Umstead Park." How necessary then, to have a "green oasis"—a breathing place, limited to what it was given the State for—"a natural area of an outdoors' environment."

Umstead is an unusual tract of land that could not be duplicated elsewhere in this section and that, for its original purposes—ecological natural history, research projects and such, to the universities, schools, students, naturalists, etc., is of vast importance. Mr. Eugene Upchurch, former park naturalist there, explains: "Ecologically it includes sections typical of three different habitats. One high area juts into a region typical of the higher Piedmont and the lower mountains (here native rhododendron grows naturally); the low eastern part is the coastal area, and yet another section has conditions similar to those of the sandhills." A "three in one" for you—thus all in all this park has some species of birds, animals, and plant life typical of those three different habitats.

Let us then, keep this park for what it was originally intended by the federal government that deeded it to the State, a place for those without large estates to find a "green oasis" for walking about, for trees, hills, brooks and wildflowers, for birds and smaller beasts, for camping and study, for research—for all the vast masses who want a quiet place to view and enjoy God's world. It is unique as it is. KEEP IT SO. . . . But to save it, we must act now.

[The above comments were excerpted from Charlotte Hilton Green's column "Out-of-Doors in Carolina," which is a regular feature in the Sunday edition of the Raleigh, N.C., *News and Observer*. Mrs. Green is a charter member and past president of Carolina Bird Club.—Ed.]

BOOK REVIEWS

Flashing Wings: The Drama of Bird Flight. John K. Terres. Illustrated by Robert Hines. Doubleday & Co., Inc., Garden City, N.Y., 1968. Index. 177 p. \$4.95.

The Audubon Book of True Nature Stories. John K. Terres, editor. Illustrated by Walter W. Ferguson. Thomas Y. Crowell Company, New York, 1958. 294 p. \$6.95.

Songbirds in Your Garden. John K. Terres. Illustrated by Matthew Kalmenoff. Thomas Y. Crowell Company, New York, 1968. Index. 256 p. \$6.95.

Two different publishers have recently released new printings of three popular books by John K. Terres, former editor of *Audubon Magazine*. All three books are so widely accepted among bird watchers and readers interested in natural history that lengthy reviews are not necessary. In *Flashing Wings* Mr. Terres uses his experiences with Princess, a Peregrine Falcon, to introduce many fascinating aspects of bird flight as related to the feeding, courtship, and migration of various species. The best review of *The Audubon Book of True Nature Stories* would be a photograph of my son's tattered copy. This collection of man-meets-animal stories has lasting appeal for both adults and young people. Some of the stories make the reader laugh while others bring a lump to the throat, but all offer him a new understanding of both men and animals. *Songbirds in Your Garden* is now available in a new and expanded edition. The page size has been enlarged to accommodate useful marginal subject notations and illustrations. The new edition is not only more attractive than the previous one but also contains such additional information as a chapter on building a bluebird trail and a section (p. 159-160) on the virtues of the homely pokeberry as a plant for attracting birds.—ELOISE POTTER

Backyard Birding

ANNIE RIVERS FAVER
Department Editor



NEW DEPARTMENT EDITOR

After nearly 17 years of devoted service, Annie Rivers Faver, originator of the "Backyard Birding" department, has asked to be relieved of editorial duties. A trip to Europe and several other projects will prevent her continuing to meet our deadlines, but she promises to contribute items for publication whenever possible. As much as we will miss you, Toncie, we are delighted you will be doing new, interesting, and useful things.

Willie (Mrs. A.E.) Morrison, a frequent contributor to *Chat* in recent years, has accepted the post as department editor. CBC is indeed fortunate to have someone of Mrs. Morrison's ability and enthusiasm to insure the continued popularity of "Backyard Birding." Please write Mrs. Morrison at 1610 Home Avenue, Hartsville, S.C. 29550. It is not necessary for items to be long or typewritten—a postal card or personal letter will be sufficient. Just be sure to share with our readers your interesting birding experiences and helpful suggestions for attracting birds.—ED.

An Economical Bird Bath

A small reflecting pool adds charm to the garden and attracts many species of birds, particularly if there is some means of dripping water into it. However, even a small pool may be prohibitively expensive if the owner cannot do the work himself or if the family must move frequently. That is why I was impressed by an article appearing in *EBBA NEWS* (Vol. 30, No. 5, published by Eastern Bird Banding Association) and reprinted from *The Ringers' Bulletin* (Vol. 2, No. 10, published by the Bird Ringing Committee of the British Trust for Ornithology). "A Portable 'Pond'" was written by Peter G. Davis, a British bird ringer. After explaining how water drip devices are useful in attracting birds to traps and mist nets, Mr. Davis offers the following suggestion:

"We found that the answer is an eight-foot length of grit-coated roofing felt. This can be carried to the site as a roll and may be laid in one of two ways. For a permanent site, it is worthwhile excavating a shallow cavity four inches shorter than the length of the felt and four inches shorter than its width

(i.e. 32 inches), but for a temporary site all that is necessary is to unroll the felt, grit-side uppermost as it gives a better foothold, and to raise the outside edges with stones, grass root or earth. The weight of the water will be sufficient to form a basin about two inches deep, 32 inches wide and as long as you like. Again, for a permanent site, a few rocks and a little clean sand will provide bathing places for the smaller fry and make the pool look a little more natural—ours even has a patch of marsh grass in one corner—but these are not really essentials for a ‘portable’ pond.”

In this country “grit-coated roofing felt” is sold as “roll roofing,” which is like asphalt shingles in texture. One mail order house sells a roll 36 inches wide and 36 feet long for less than \$5.00, but the minimum order is two rolls—considerably more than most people would want for splash pools. Fortunately roofing contractors often have scraps they will sell reasonably or even give away if one is not too particular about the size or color.

Since I very much wanted a bird bath and saw little hope of my husband’s having time to build one in the near future, I decided to try Mr. Davis’ idea. A low spot in the yard offered a natural basin which the boys and I enlarged to accommodate the two pieces of green roll roofing given us by a local contractor. We spread a sheet of plastic over the ground to check the water level and to be sure water would flow from the small upper section into the larger one. Then we slipped the roofing into place, trimmed away unwanted corners, mounded dirt and rocks over the edges, and added moss, ferns, and several other plants to make the pool look as natural as possible. The end of the garden hose was propped on some rocks and the water trickled merrily into the pool. The project had taken just one afternoon, and the birds nearly bumped into us trying to get to the water.

Neighboring CBC member Gladys Baker duly admired the pool and its economical method of construction, but she declared that it needed more rocks and plants. She returned with a wheelbarrow full of materials and set to work. Very shortly the pool had an artistically designed moss-covered mound of rocks and soil at the high end. Embedded in this was a short length of plastic hose so arranged that when the garden hose was disconnected the permanently placed section would drain completely and not be damaged by freezing water. At the low end of the pool where the overflow keeps the ground wet are some bog plants such as cattails and Jack-in-the-pulpit. Thrift, ajuga, oxalis, partridge berry, coral bells, violets, and other such plants quickly covered the bare dirt around the pool. Miss Baker planted some pansies for color, but they bloomed only once before our wild rabbits discovered them to be a vegetarian’s delight. All the other plants have flourished beside the pool in spite of the constant coming and going of birds, rabbits, and children.

Our only problem with the pool is its being a convenient place for mosquitoes to lay their eggs. The children gladly took care of this problem by installing a small fish which devoured all the wigglers in a single afternoon.

While our little pool cannot possibly be mistaken for a natural body of water, it does reflect the sky, attract birds and children, and add beauty to the yard. Never has anything given our family more pleasure in proportion to the amount of time and money put into it. I highly recommend a permanently installed portable pond, particularly if you have a generous and talented neighbor like Gladys Baker to give you a helping hand.—ELOISE POTTER, Zebulon, N.C.

General Field Notes

JAMES F. PARNELL, *Department Editor*
Department of Biology, Wilmington College, Wilmington, N. C.

Eared Grebe at Pea Island, N.C.—An Eared Grebe (*Podiceps caspicus*) was observed at the north dyke of the North Pond at the Pea Island National Wildlife Refuge in northeastern North Carolina on 31 December 1967. It was in a mixed group of ducks and grebes. The dark neck and the very small, white cheek patch were distinctive. The grebe was compared with nearby Horned Grebes (*P. auritus*), and the difference between the bills of the two species was quite apparent. Warren is familiar with this species having seen it in the same plumage the previous winter at Back Bay, Virginia. Observations were made with 7 X 50 binoculars and a 30 X Balscope as close as 20 feet. Light was not a factor as the day was overcast and there was no direct sunlight. On the following day Mr. and Mrs. Jack Potter, Harry LeGrand, and Edmund LeGrand observed the bird at the same location and verified our identification. They were using a Questar with good light.

This was apparently the second record of this species in North Carolina. The first record was of an Eared Grebe observed and photographed in Wilmington by J.F. Parnell on 13 December 1964 (*Chat*, 30:25).—MIKE M. BROWNE, 2728 Cambridge Road, Raleigh, N.C., AND PHILIP H. WARREN, 100 S. Fraternity Court, Raleigh, N.C., 21 April 1968.

Leach's Petrel Along the North Carolina Coast.—On 28 May 1967 numerous small black birds with white rumps were sighted flying low over the ocean near Morehead City, N.C. These birds, which could only have been petrels, were seen along the beach at the Oceanana fishing pier and in the harbor near Lenoxville Point, 2 miles distant from the ocean. The same day we observed up to three petrels at a time skimming the breakers close to the Iron Steamer fishing pier (5 miles west of the Oceanana pier) in company with a Sooty Shearwater (*Puffinus griseus*). We failed to sight any petrels the next day, but did spot one near the Iron Steamer pier on 30 May. On 11 June we again saw petrels and Sooty Shearwaters along the shore—this time between Cape Lookout and the entrance to Morehead City harbor. All the petrels that we were able to identify were Leach's Petrels (*Oceanodroma leucorhoa*).

We also sighted a number of petrels and Sooty Shearwaters on 1 to 3 June during an oceanographic cruise aboard the R/V *Eastward* along the continental shelf between Morehead City and Oregon Inlet. Again all identified were Leach's Petrels. Throughout the cruise, petrels approached so close that the dark feet and forked tail could be readily distinguished without binoculars. They did not, however, in general appear to follow the vessel. An exception was a group of three, all definitely Leach's Petrels, which remained in sight for several hours while the *Eastward* cruised off Cape Hatteras.—RICHARD B. WILLIAMS AND DORIS C. WILLIAMS, 301 Virginia Avenue, Morehead City, N.C., 14 June 1967.

[This appears to be the first published record of Leach's Petrel in North Carolina waters.—DEPT. ED.]

Harlequin Duck at Carolina Beach, N.C.—On 27 March 1967, a Harlequin Duck (*Histrionicus histrionicus*) was observed in the surf off Carolina Beach, N.C. The bird, a female, was first located, alone, about 30 yards offshore.

Of the three spots present on the bird's head, only one was well defined. This spot, toward the back of the head was circular, not elongated as in the

female Bufflehead. The other two spots, in front of and above and below the eye, were not well defined, giving the bird a light-faced appearance. While under observation, the bird flushed twice, showing wholly dark wings, differentiating it from the female Bufflehead, which has a white wing patch.

After the bird flushed the second time it was not relocated until about 10:00 AM, three hours later. It was found the second time with a pair of Buffleheads, with which it rested and dived around the pilings of an old pier. Compared to the female Bufflehead, the Harlequin Duck was much darker, seemed more slender, and had a smaller head. The bird was still present when I left the area at 11:30 AM.

There are three previous records of the Harlequin Duck in North Carolina, two of which were made in this same general area. Greg Massey and Maurice Barnhill observed a male at Carolina Beach on 30 December 1961 (*Chat*, 26: 18-19), and James F. Parnell found a male in almost the exact same place as the 1961 bird on 17 December 1964 (*Chat*, 29:24). The current observation was made only a few hundred yards from the place of the earlier sightings. The third record was of a bird found by R.P. Holmes at Ft. Macon, N.C., on 4 January 1964 (*Chat*, 28:29).—DERB CARTER, 417 Devane Street, Fayetteville, N.C., 28 March 1967.

[A male Harlequin Duck was also reported from Ft. Macon near Morehead City, N.C., during the winter of 1966-1967. This bird was seen by numerous observers on several occasions and apparently spent most of the winter in the vicinity of Ft. Macon. This bird was reported in the Briefs in September 1967. It should also be noted here that the Harlequin Duck observed by J.F. Parnell at Carolina Beach during the winter of 1964 (*Chat*, 29:24) was joined by a female which was first seen by Paul Sykes on 26 January 1965. The drake was subsequently collected on 2 February (*Audubon Field Notes*, 19(3):369) and is now in the collection of the Biology Department of Wilmington College. It represents the only known specimen of this species taken in North Carolina.

Thus, the birds reported in 1967 at Carolina Beach and Ft. Macon represent the fifth and sixth birds reported in North Carolina, all since 1961. All birds have been associated with piers or rock jetties; and perhaps the increase in these two artificial feeding sites, similar to the natural rock coast feeding sites of this species further north, is partially responsible for the increased occurrence of this bird.—DEPT. ED.]

Wintering Pigeon Hawk in the Western North Carolina Mountains.—On 27 December 1965 a Pigeon Hawk (*Falco columbarius*) was seen near Franklin, N.C. The first observations were of the bird in flight and then perched in my yard in a tulip poplar tree about 30 yards away. Here it perched, slightly facing me, for over 20 minutes. When perched it appeared gray, with dark cap, buffy neck, and very light underparts with dark streaking. The tail was gray with wide black bands, the band at the end of the tail being widest. When it flew away in sunlight its back and long, sharp-pointed slender wings were definitely gray, so I recorded it as a male Pigeon Hawk. It was seen again both perched and in flight on 13 January 1966.

My yard borders a narrow valley which is surrounded by steep mountain peaks. A stream meanders through this valley separating a corn field from a large meadow. The creek is lined with tall sycamore, beech, maple, tulip poplar, cherry, ironwood and other trees. The understory is of rhododendron, mountain laurel, flame azalea, privet, sassafras and brambles of blackberry and raspberry canes. Tall weeds and grasses with patches of Hall's honeysuckle also form dense mats which make excellent cover for small mammals and birds.

Through the months of January and February in 1967 there was construction work being done on my home and grounds and serious birding was impossible. However, on three occasions during late winter and early spring of 1967,

while driving a side road about a mile from my home, I observed a Pigeon Hawk, twice in flight, and once perched on the limb of a solitary tree on a pasture hillside. On each occasion I watched it for several minutes from the car. On all occasions it was observed in good light, and the field marks were carefully noted.

On 22 December 1967 I again observed a Pigeon Hawk fly from a telephone wire about 50 yards from where I had first observed one in December of 1965. My attention was first focused on its gray coloration, its falcon-like wings and tail, and the lack of a face pattern. While telephone wires are the accustomed perches for Sparrow Hawks, this definitely was not a Sparrow Hawk. On 3 January 1968 he was again perched at the same place. On this date comparison was possible with a Sparrow Hawk seen about 2 miles further down the highway. The Pigeon Hawk was again seen on 12 and 15 January in the vicinity of my home. It was last seen on 21 January 1968.

Thus, for the past three winters a Pigeon Hawk has been seen on several occasions near Franklin, N.C., and apparently wintered each year in this vicinity. —MARY ENLOE, *Route 1, Box 193, Franklin, N.C., 25 January 1968.*

[There are several December records for the Pigeon Hawk in North Carolina but no records of sequential observations this late in the winter. *South Carolina Birdlife* (Sprunt and Chamberlain, 1949) lists this species as a fairly common winter resident over most of South Carolina, so it is not surprising that careful observation over a period of time has brought to light evidence of this species wintering in North Carolina. Careful attention to late fall records in other parts of the state should expose other incidents of this species wintering in North Carolina.—DEPT. ED.]

Black-and-white Warbler Nesting at Southern Pines, N.C.—On 15 June 1967 a female Black-and-white Warbler (*Mniotilta varia*) was seen in a wooded area near my home at Southern Pines, N.C. The warbler appeared to be carrying food, but a nest could not be located on this date. I returned to the same spot on 16 June and located a young Black-and-white Warbler with the female. It was well feathered and could fly well for short distances. It was also observed “creeping” like an adult Black-and-white Warbler.

The woodland in which these observations were made is bordered on all sides by a golf course. The young warbler was seen in a stand of scrub oaks and pine trees. The female was also observed feeding in a nearby stand of medium to large deciduous trees.

This is the first definite indication of nesting of the Black-and-white Warbler in the Southern Pines area. Southern Pines lies on or near the southeastern border of the summer range of this species.—JAY CARTER, *P.O. Box 891, Southern Pines, N.C., 11 May 1968.*

Sutton's Warbler at Eastover, S.C.—For several days beginning on 4 September 1967, when a cold front passed through central South Carolina, more migratory warblers were in my yard than I had seen in many years. The first to attract my attention was a bird that was present on 4 September with a family of Parula Warblers. The bird was larger than the Parula Warblers, grayer on the back and with a yellow throat. I immediately thought, “a Yellow-throated Warbler,” but when the bird reached down to get a worm off of a leaf a patch of greenish-yellow on the upper part of his back between the wings showed conspicuously. Also, there was a light line above the eye, and a few dark streaks along the bird's sides. Using Peterson's *Field Guide to Eastern Birds* I checked the Sutton's Warbler point by point, and all points matched, particularly the two white wing-bars, in combination with the greenish-yellow patch on the back.

From *Warblers of North America* (Criscom and Sprunt, 1957) I learned that a Sutton's Warbler had been seen by Mr. and Mrs. Robert Edwards near

McClellanville, Charleston County, S.C., on 16 August 1952. Ted Beckett and Ellison Williams also found one near Charleston on 27 April 1963 (personal communication of unpublished report). It stands to reason that if these birds are hybrids between the Parula Warbler and the Yellow-throated Warbler they could occur in the vicinity of Eastover, as both parent species are summer residents here.—ANNIE RIVERS FAVER, *Route 2, Box 6, Eastover, S.C., 16 November 1967*.

Sutton's Warblers at Columbia, S.C.—Migrations of any size in this fast-growing metropolis are almost a thing of the past. On 6 and 7 September 1967, however, the fall migration peaked with many common species present. Among these was a pair of what I declare to be Sutton's Warblers.

I knew immediately that I was looking at something I had never seen before. From 15 to 20 feet high in red maples (*Acer rubrum*) and dogwoods (*Cornus florida*) were two birds resembling the Yellow-throated Warbler but with an easily visible greenish-yellow patch on the back. They lacked white facial patches, had only faint side-streaking and just a trace of a darkish throat-wash. They were larger than Parula Warblers and besides had distinct white eyebars. The pair was identical except that the yellow of the throat was brighter on one than the other.

After flitting about for some time, close before me, they perched inches apart, preened for a few minutes and then tucked their heads beneath their wings. I then went indoors and brought out copies of *A Field Guide to Eastern Birds* (Peterson, 1947), *Birds of North America* (Robbins et. al, 1966), and *Warblers of North America* (Griscom and Sprunt, 1957). I spread all of these on the terrace and quickly made comparison of the three species.

In about 15 minutes the warblers roused, flew about again for a short time close at hand, then finally moved higher into the tree tops where I lost them.

I am thoroughly familiar with the Yellow-throated Warblers and Parula Warblers. I was using 7 X 35 Zephyr binoculars and the morning light was excellent. The viewing probably lasted from 35 to 40 minutes. I had every opportunity to observe them carefully and with ease from all angles.

The following day I had a second brief look at the warblers in the same trees, but it only served to reconfirm my earlier identification.

Despite all that has been written about the improbability of identifying this elusive species, or subspecies, or hybrid, especially in the fall, I am firmly convinced that I was not seeing Yellow-throated or Parula warblers. No Yellow-throated Warbler has a greenish-yellow patch nor does a Parula Warbler sport a white eyebar.

I was at Eastover, S.C., on 5 September and knew that Annie Rivers Faver had identified a Sutton's Warbler on 4 September. The only other known observation in South Carolina was that of Frances and the late Bob Edwards at Ardea, near McClellanville (*Warblers of North America*, Griscom and Sprunt, 1957).—KAY C. Sisson, *1617 Tanglewood Rd., Columbia, S.C., 8 September 1967*.

Observations of Sutton's Warblers have been extremely limited. Two specimens in spring plumage have been collected, but no birds in fall plumage have been secured. The species was described as *Dendroica potomic* and is on the hypothetical list of the American Ornithologists' Union. It has, however, been more generally considered to be a rare hybrid between the Parula and Yellow-throated warblers.

The fact that no specimens have been taken in the fall and little is known about the plumages at that season plus the general difficulty of identifying many warblers in fall plumages means that observations of this warbler at this season must be treated with extreme caution. Many professional ornithologists will view such observations with much skepticism. However, since the taxonomic status of this bird is in such doubt and since so little is known about any phase

of its life history, all information concerning occurrences, plumages, habits, etc. is quite valuable. Even though the validity of such records is difficult to ascertain by observer and editor alike, due to the limited materials available in the literature, all careful observations by competent observers should be published. These can be treated with more certainty if and when we learn more about this elusive bird.—DEPT. ED.]

Winter Resident Song Sparrow Involved in Breeding Range Extension.—The Song Sparrow (*Melospiza melodia*) has been recently extending its breeding range in the piedmont of North Carolina (P.W. Sykes, *Chat*, 30:39-42, 1966) and individuals were first noted breeding in Raleigh in 1965. In the spring of 1966 a Song Sparrow was observed at a second location in Raleigh. This particular bird had been color banded the preceding winter. Observations of this individual are of interest since it was evidently a winter resident in the same locality in which it established a breeding territory.

From late April to early June, this color banded Song Sparrow was regularly seen singing from a few trees bordering Lake Raleigh on the north side. The bird sang steadily each morning while perched about 20 feet above the ground. When chased it would not leave the immediate vicinity. The bird was last observed on 10 June, when it had moved and was found singing about 200 yards from its usual site. Although this Song Sparrow was never successful in attracting a mate, the above observations do indicate that he had established breeding residence, and can therefore be considered a part of the breeding range extension of the species.

This Song Sparrow had been color banded on 30 December 1965, and was seen on several occasions that winter. The location of banding and subsequent observations was the same as that in which the bird established summer residence. By this incident, I am led to postulate that the range extension of the Song Sparrow in the piedmont of North Carolina may result from winter residents on the edge of the breeding range becoming permanent residents. More data are needed to support this suggestion, however. This might be obtained by the cooperative efforts of banders who know of recently established breeding Song Sparrows in the piedmont, and who by banding can establish whether or not the birds are permanent residents or summer residents only.—STEVE FRETWELL, *Statistics Department, 514 General Laboratory Building, North Carolina State University, Raleigh, N.C.*, 16 March 1968.

BRIEFS FOR THE FILES

Compiled by JAMES F. PARNELL

(All dates 1968 unless noted)

Red-necked Grebe, a single individual was seen on 26 January at Topsail Island, N.C. by Gilbert Grant.

Brown Pelican, reported to be in increased numbers this winter at Wrightsville Beach, N.C. by Dorothy Earle and Frances Needham and in the Charleston-Georgetown, S.C. vicinity by Ted Beckett.

Glossy Ibis, six were observed in a roadside pond at the Pea Island National Wildlife Refuge in northeastern North Carolina on 27 and 28 December 1967 by Joshua and Janice Lee. Three birds were seen at Pea Island on 29 January 1968 by Bruce A. Mack. Ted Beckett reports that this species wintered in unusually large numbers in the vicinity of Charleston, S.C.

- White Ibis**, Ted Beckett found this species to be present in increased numbers during the winter in the vicinity of Charleston.
- Louisiana Heron**, one was seen at Bodie Island in the Cape Hatteras National Seashore during the last week of December 1967 by Joshua and Janice Lee.
- Whistling Swan**, three were seen near Anderson and Lake Hartwell in western South Carolina on 27 December 1967 by Adair Tedards. One was found at the Pee Dee National Wildlife Refuge in Anson County, N.C. on 10 February by Doug Pratt, Mark Simpson, Lee Jones, and Mike Browne. At the nearby Gaddy's Pond, also in Anson County, a single swan was seen on 17 February by Lee Jones. Thirteen were seen at Bull's Island, S.C. on 20 January by Ted Beckett.
- Snow Goose**, approximately 50 were seen on the Kerr Scott Reservoir near North Wilkesboro, N.C. by John Hubbard and reported to Wendel Smith. Two were seen near Charleston on the Ashley River on 10 December 1967 by Ted Beckett, and several were seen on 12 December 1967 at McClellanville, S.C. by S.C. Langston.
- Blue Goose**, a single bird joined a small flock of domestic geese near North Wilkesboro on 23 December 1967. It was still present on 24 February, Wendel P. Smith.
- Common Merganser**, a pair was seen on Lake Johnson near Raleigh on 11 January by Dale Lewis.
- Red-breasted Merganser**, a pair in breeding plumage was found on Lake Wheeler near Raleigh on 11 March by Robert J. Hader.
- Golden Eagle**, an immature bird was seen on several occasions during the winter of 1967-1968 at Magnolia Gardens, S.C. by Ted Beckett.
- Rough-legged Hawk**, one was seen near North Wilkesboro on 15 February by C.R. Hough.
- American Golden Plover**, a single bird was seen near Raleigh on 23 March by Robert J. Hader.
- Pectoral Sandpiper**, about 50 were found in a flock near Raleigh on 23 March by Robert J. Hader.
- Ruddy Turnstone**, a single bird was seen in Lenoir, N.C. between 6 and 12 September 1967. The bird was found in a parking lot and on nearby streets in the center of town, Margaret Harper.
- Herring Gull**, two were seen at Winston-Salem, N.C. on 2 January by C.R. Hough, and four were found near Raleigh on 11 January by Dale Lewis. At North Wilkesboro two Herring Gulls were found on the Kerr Scott Reservoir on 23 December 1967 and two on 26 January 1968. A single bird was found near North Wilkesboro on 15 March, Wendel P. Smith.
- Bonaparte's Gull**, three were seen at Winston-Salem, N.C. on 2 January for the first record for that locality, C.R. Hough. Two were found near Raleigh on 26 March by Robert J. Hader.
- Mourning Dove**, a pair was found incubating eggs on 3 December 1967 at Hartsville, S.C. by Mrs. Willie M. Morrison.
- Ruby-throated Hummingbird**, one was seen at Columbia, S.C. on 20 December 1967 by Mrs. B.W. Kendall and Mrs. William Beck. A single individual was early at Ocracoke Island, N.C. on 17 and 18 March, Mrs. Jack Willis.
- Winter Wren**, one was early on 5 October 1967 at Hartsville, S.C., Mrs. Willie M. Morrison.
- Brown Thrasher**, a single bird spent the winter in the North Carolina mountains at Crumpler, Mrs. A.B. Hurt.
- Ruby-crowned Kinglet**, one was early on 12 September 1967 at Hartsville, S.C., Mrs. Willie M. Morrison.
- White-eyed Vireo**, late individuals were found on 7 and 10 December 1967 in Richland County, S.C. by Bruce A. Mack.
- Black-and-white Warbler**, late birds were seen at two localities. One was seen

on 18 December 1967 at Crumpler, N.C. by Mrs. A.B. Hurt. On 5 December 1967 a Black-and-white Warbler was seen along the Congaree River in Richland County, S.C. Two were seen there on 7 December 1967, Bruce A. Mack.

Orange-crowned Warbler, one was seen on 17 December in Richland County, S.C. by Bruce A. Mack.

Yellow-throated Warbler, one was late on 17 December 1967 in Richland County, S.C., Bruce A. Mack.

Kentucky Warbler, a late bird was seen on 2 December 1967 near Hartsville, S.C. by Mrs. Willie M. Morrison.

Yellow-breasted Chat, a single individual was seen at Crumpler, N.C. on 11 January, Mrs. A.B. Hurt.

Baltimore Oriole, five seen in Winston-Salem at feeders throughout the winter represent the first winter records for this locality, C.R. Hough. Numbers of wintering birds were much increased at Chapel Hill, Robert P. Teulings.

Painted Bunting, a male appeared very early at a feeder on Hilton Head Island, S.C. on 4 February, Mrs. J.G. Newhall. A female was present throughout the winter at Edisto Island, S.C. at the home of Mr. and Mrs. Harvie S. Lybrand.

Dickcissel, three were seen at Knott's Island, N.C. on 19 May 1967 by Mrs. Floy Burford. One was found on 29 February 1968 at Greensboro, N.C. by Mrs. Ben Lambeth.

Evening Grosbeak, two were reported on 16 March at North Wilkesboro by Wendel P. Smith.

Common Redpoll, six were found at North Wilkesboro on 29 January, W.P. Smith.

Pine Siskin, two were found on 15 February at Winston-Salem by C.R. Hough, and one was seen on 28 February at North Wilkesboro by Wendel P. Smith.

House Finch, a male was studied carefully on 25 March 1968 at a feeder in Chapel Hill by Robert M. Geist.

Grasshopper Sparrow, one was early at Chapel Hill on 16 March, Robert and Elizabeth Teulings.

Oregon Junco, one was studied carefully at a feeder in Winston-Salem on 23 to 26 February by C.R. Hough. This is the second sighting in three years at this locality.

Tree Sparrow, four were banded and several others observed during the last two weeks of January 1968 at Chapel Hill by Robert and Elizabeth Teulings. One was found at Raleigh on 17 January by Harry LeGrand.

Snow Bunting, a flock of 25 was found at Emerald Isle, N.C. on 4 February by Mrs. Paul Payne.

NEWS AND COMMENTS

Cape Lookout Ferry Service

In planning coastal birding trips CBC members might like to keep in mind the fact that there is regular passenger ferry service from Harker's Island to Cape Lookout from 1 June to Labor Day. Capt. Josiah Bailey also operates the *Diamond City*, his unique ferry with sails, during the off season on a charter basis. During October he schedules excursions for bird watchers along 25 miles of the intracoastal waterway from Morehead City to Oriental. For an informative brochure write Capt. Bailey at Box 598, Morehead City, N.C. 28557.



Founded 6 March 1937

Incorporated 8 August 1949

Carolina Bird Club is an incorporated association for the study and conservation of wildlife, particularly birds, chiefly in the Carolinas. Founded in 1937 as the North Carolina Bird Club, it was joined in 1948 by several South Carolina natural history clubs and the name changed to the Carolina Bird Club.

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All papers, census reports and notices for publication in *The Chat* should be sent directly to the Editor. However, items intended for the General Field Notes, Backyard Birding, or Conservation departments should be sent to the respective department editors.

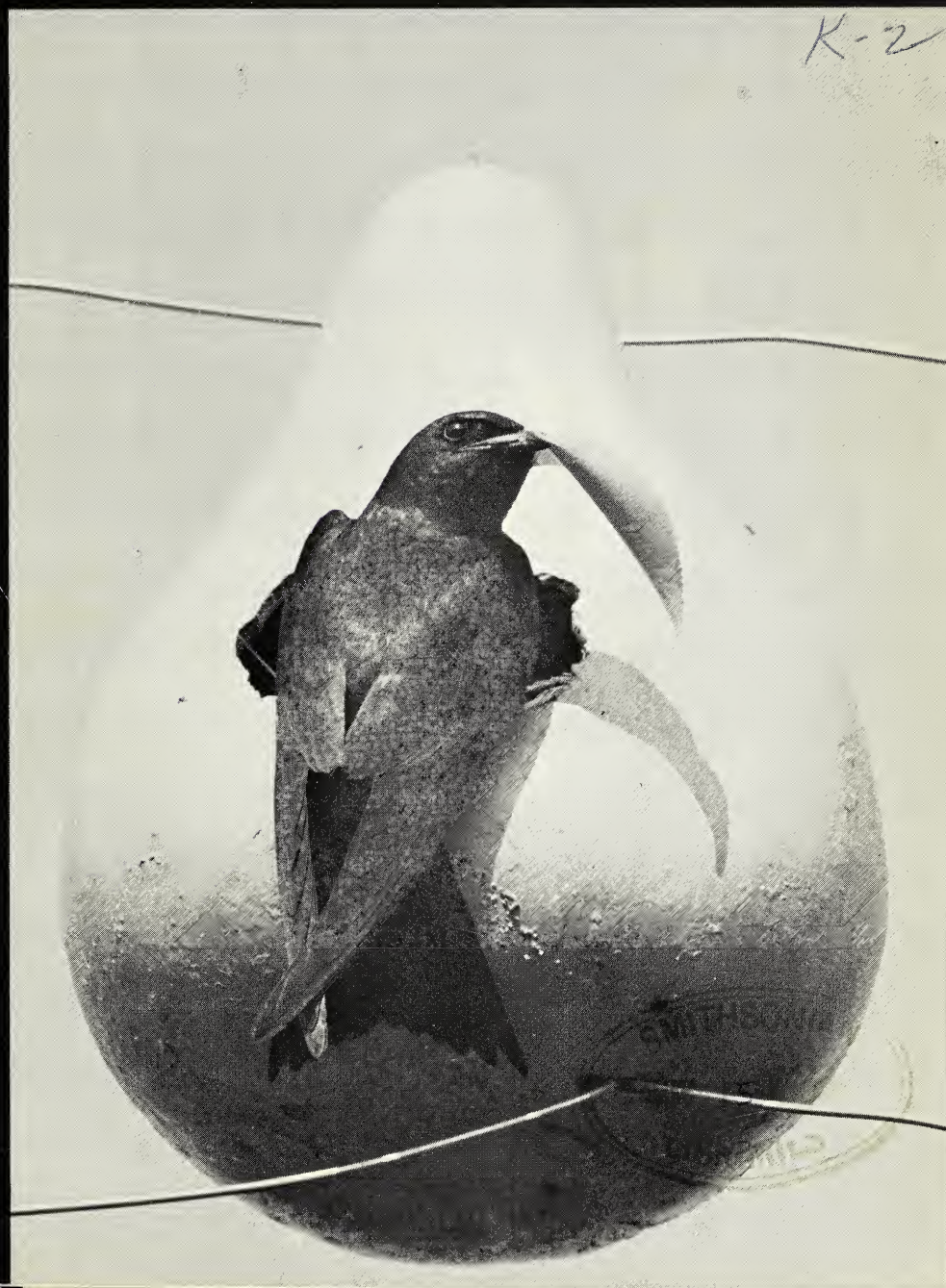
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BIRDS

The Chat

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The Chat

Volume 32

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OUR COVER—The Purple Martin cover photograph was taken by Linn E. Joy and is used by courtesy of the News Bureau at Wingate College, Wingate, N.C. Another martin photo by Mr. Joy appears in "Carolina Birds and Birders" accompanying a feature article by James S. Fletcher of the Wingate College Science Department.

EDITORIAL: NEW FACES

In its 32-year history *Chat* editors have tried, usually with commendable success, to adapt the bulletin to the ever widening interests of CBC members. The present issue embodies several innovations which the editors hope will enhance the usefulness of *Chat* to the average reader, lower production costs, and at the same time permit presentation of the maximum number of papers and notes of scientific importance or popular appeal.

"Birdwatchers' Roundtable" is a new department edited by two enthusiastic field observers, Mark Simpson and Doug Pratt. Readers will remember Mark for his recent paper on the American Woodcock (*Chat*, 32:35-39), and Doug for his lovely drawings in the March 1967 and 1968 issues. While these department editors can tell us a great deal about how, when, and where to find birds in the Carolinas, they are counting on readers to share directions to their own favorite birding spots. Remember, a place you visit regularly may be unknown to new birders in your community as well as to people visiting from other parts of the Carolinas.

Over the years "Backyard Birding" has grown into an informal field notes section, often presenting important information on bird distribution and behavior. Recognizing the broad scope of the department, the new editor, Willie (Mrs. A.E.) Morrison, has selected a new title, "Carolina Birds and Birders." In addition to facts about birds at home and afield, she plans to offer interviews with prominent ornithologists and any other surprises she and her contributors can devise.

The third change involves the presentation of the Spring and Christmas Bird Counts. In this issue you will find a streamlined table which lists for each species the common name, total number of individuals, and comments on distribution or abundance. Generalizations are substituted for raw data except when exact figures are deemed important. The full tabulation of all the local lists still must be made, and the complete table will be filed by the Editor for reference purposes. It is hoped that the new format will help readers quickly comprehend the significance of count data, and at the same time reduce production costs. Charges for setting the count tables have increased out of proportion to all other expenses for publication of *Chat*. At the same time participation in the bird counts has grown to the point that reports from new areas would have to be refused, or the observers would have to be asked to share the cost of publication (as has long been done by *Audubon Field Notes*). Faced with such unpleasant alternatives, we decided to experiment with a new style which will in no way limit the number of local count areas. We are not making *Chat* smaller, since space thus saved will be devoted to other features; we are trying to make the bulletin better serve the needs and interests of all our members.—EFP

1967 BREEDING BIRD STUDY AT CHAPEL HILL, N.C.

WILEY B. SANDERS

During 1965 and again in 1966 I made a breeding bird study in the vicinity of Chapel Hill, N.C., to determine as nearly as possible how many of the nests

TABLE 1. *Outcome of nests by species at Chapel Hill, N.C., 1967.*

Nests	Species	Success	Failure	Unknown
3	Bobwhite	1	2	0
1	Mourning Dove	1	0	0
1	Yellow-billed Cuckoo	0	1	0
1	Screech Owl	1	0	0
6	Yellow-shafted Flicker	1	1	4
2	Red-bellied Woodpecker	1	0	1
2	Red-headed Woodpecker	0	2	0
1	Eastern Kingbird	1	0	0
1	Great Crested Flycatcher	0	1	0
7	Eastern Phoebe	5	1	1
2	Acadian Flycatcher	1	0	1
6	Eastern Wood Pewee	1	2	3
1	Barn Swallow	0	0	1
2	Blue Jay	2	0	0
2	Carolina Chickadee	1	1	0
1	Tufted Titmouse	0	0	1
1	White-breasted Nuthatch	1	0	0
1	Brown-headed Nuthatch	1	0	0
2	House Wren	2	0	0
1	Carolina Wren	1	0	0
10	Mockingbird	5	1	4
5	Catbird	3	0	2
6	Brown Thrasher	4	1	1
17	Robin	7	4	6
21	Wood Thrush	9	5	7
3	Eastern Bluebird	3	0	0
1	Loggerhead Shrike	1	0	0
5	Starling	1	0	4
2	Red-eyed Vireo	2	0	0
1	Prothonotary Warbler	1	0	0
1	Yellowthroat	1	0	0
1	Eastern Meadowlark	0	1	0
1	Red-winged Blackbird	0	0	1
2	Orchard Oriole	0	1	1
2	Common Grackle	0	1	1
2	Brown-headed Cowbird	0	2	0
2	Summer Tanager	0	2	0
16	Cardinal	3	9	4
2	Indigo Bunting	0	2	0
4	Rufous-sided Towhee	1	2	1
7	Chipping Sparrow	0	6	1
1	Field Sparrow	0	0	1
156	Totals	62	48	46

were successful, how many were failures, and how many were of doubtful or unknown outcome (*Chat*, 31:3). Eighty-seven nests were covered in 1965, and 141 nests in 1966. A more intensive study of breeding birds was made in 1967 with a total of 156 nests accepted for study, embracing 42 species. A Wood Thrush nest and a Chipping Sparrow nest were parasitized by Brown-headed Cowbirds; therefore, these nests were counted twice each, once for the host species, and once for the cowbird. The total number of physical nests was 154.

The area covered was essentially the same as in the preceding studies. In 1967 slightly over half the nests (82) were found in mixed woods bordering the Finley Golf Course; 24 nests were found in our yard, gardens, and adjacent woods; 15 nests were found on the campus of the University of North Carolina, while the remainder were found elsewhere in the area.

The time period covered was slightly over five months, from 26 March until 30 August, with the exception of two weeks (8 to 23 June) when I was out of the State.

Out of a total of 156 nests, 62 were classed as successes, 48 were listed as failures, and for 46 the outcome was unknown. As may be seen in Table 1, there was considerable variation in representation of nests by species, with the Wood Thrush in the lead with 21 nests.

CAUSES OF FAILURE

Forty-eight nests were listed as failures because no young left the nest successfully. An attempt is made to assign a cause for the failure of each nest based on the available evidence. In 36 cases the contents were destroyed by an unknown predator. Four nests in this group were found with eggs sucked or the egg shells pierced. Five nests were found to be deserted for an unknown cause. High winds or rainstorms destroyed three nests. The death of a parent bird probably was responsible for two nest failures. A blacksnake found inside an active Yellow-shafted Flicker nesting hole was clearly the cause of that nest's failure. Too close checking by the investigator probably caused one nest to be deserted.

RATE OF NESTING SUCCESS

Since a study of this type is not subject to scientific proof, but depends upon the personal judgment of an experienced observer, the presentation of percentage rates of success and failure may seem out of place. There are many students of bird life, however, who are curious as to the relative success of breeding activities, and the best we can do at present is to give reasonable estimates of success and failure. Disregarding the nests of unknown outcome, it would appear that the rate of success for nests in 1967 was approximately 56%, while the failures made up about 44%.

Perhaps a better measure of success and failure of nesting activities would be a study covering a longer period than a single year. In Table 2 may be seen the results of our three-year study, 1965-1967, of breeding birds in Chapel Hill.

TABLE 2. *Summary of a three-year breeding bird study at Chapel Hill, N.C.*

Year	No. Nests	No. Species	Success	Failure	Unknown
1965	87	32	33	37	17
1966	141*	38	67	53	19
1967	156*	42	62	48	46
Totals	384		162	138	82

*Two Brown-headed Cowbird nests counted twice, once for each species.

Of the total of 300 breeding pairs followed up during this time, where it was possible to determine the outcome, 162 were classed as successful and 138 were listed as failures. The rate of success was 54% as compared with 46% failure.

606 Coolidge Street, Chapel Hill, N.C.

NEWS AND COMMENTS

Flashing Wings

John K. Terres, author of *Flashing Wings: The Drama of Bird Flight*, has called to the attention of the Editor the fact that this is a new book rather than a reprinting, as was erroneously stated in the June 1968 *Chat*. *Flashing Wings* appeared in April 1968 and has an introduction by Dean Amadon, Chairman of the Department of Ornithology, American Museum of Natural History. Commenting on his new book, Mr. Terres said, "Although *Flashing Wings* is popular, in the sense of treating a very technical subject with as much simplicity as possible, it is a serious work in the field of bird flight and one that I have researched deeply in the literature for many years—a book that also required about two years of work in the writing. It includes many personal experiences of other scientists and ornithologists, and some of my own experiences in studying bird flight through about 35 years. I hope *Flashing Wings* will be useful to everyone interested in a history and summation of bird flight as we know it today."

Monthly Field Check Lists Available

Robert C. Ruiz, 300 Wilson Avenue, Swannanoa, N.C., offers for sale at \$1.25 per dozen (postpaid) a Monthly Field Check List of 412 birds of Eastern North America. Following the common names of the species are 31 numbered columns. Printed on both sides of heavy paper, the list folds compactly to slip easily into a pocket 3½ inches wide and about 6 inches deep.

National Photoduplicate File

Audubon Field Notes for February 1968 (Vol. 22, No. 1, pages 45-47) announces the establishment of the National Photoduplicate File under the auspices of the U.S. Fish & Wildlife Service, Migratory Bird Populations Station, Laurel, Md. This program will enable bird students to document rare occurrences by placing on file color or black-and-white slides (35 mm in 2x2 mounts) or prints (not exceeding 4 x 6 inches in dimension). Each photograph should be properly marked for identification and accompanied by a 3 x 5 inch record card prepared according to the instructions given in *Audubon Field Notes*. Photos inadequate for publication may be satisfactory for the National Photoduplicate File where study with a hand lens could reveal important details that would be invisible in a printed reproduction. Bird photographers in the Carolinas are urged to read the article in AFN and to cooperate fully with the National Photoduplicate File, which is directed by Chandler S. Robbins, author of the popular new field guide, *Birds of North America*.

MARCUS B. SIMPSON JR.
P.O. Box 167
Statesville, N.C.

H. DOUGLAS PRATT
Rt. 3, Box 113L
Charlotte, N.C.

Bird Watchers' Roundtable

The Carolinas have enjoyed a rich and proud heritage in ornithology. Mark Catesby found the inspiration and material for his magnificent bird paintings in this land of ours. John Bachman, Arthur Wayne, John Cairns, and the Brimleys consumed a lifetime of intense study here. John Audubon, Alexander Wilson, William Brewster, and the Bartrams came in search for the joy of discovery among our verdant mountains, cypress-lined swamps, and wind-swept beaches. As a result of this effort, more birds have been described from South Carolina than any other state in the Union; and the Tar Heel State is unexcelled in the Southeast for the great variety of birds which may readily be seen here.

Yet even with such a heritage, much remains to be learned. Many species are undergoing rapid changes in their ranges; little is known of the life and habits of certain rare birds native to our area; man's impact on the environment must be constantly evaluated; and the exact status of many common birds remains poorly known. While much awaits discovery, even more is awaiting *rediscovery* by those of us who have never explored the spruce-fir forests of our rugged mountains, nor wandered along the Outer Banks during autumn, nor searched the great swamps of the Low Country. Carolina awaits rediscovery by us all, and we hope that this column will convey some of the fascination of exploring this land which has captured the imagination of so many before us. Perhaps by sharing our experiences, we can stimulate further interest and study, and lead to a renewed desire to preserve this heritage of beauty which is ours.

This column, therefore, will be concerned with the *how*, *when*, and *where* of finding birds in the Carolinas. In addition to long articles on particular regions or rare species, there will be items of general information about recent field observations in the two States. You are invited and indeed urged to send us any information about your favorite birding spots in the Carolinas; and we will welcome any major contributions, such as the excellent article "Bird Finding: Northwestern South Carolina" by Adair Tedards (*Chat*, 28:11-13). Our only request is that you give thorough instructions on how to get to the areas which you describe: including accurate mileages, good landmarks, and rural, state, or national road route numbers.

Bird Finding: Basic Aids

Before going into the field, it is a good idea to acquire certain published and printed aids. Although a good field guide is indispensable, I have found it quite helpful to take *both* the Peterson *Field Guide* and the more recent *Birds of North America* by Chan Robbins. These two books provide an excellent complement to each other, not only in their color plates but also in their descriptions of field marks. Of course the standard references for occurrences in our specific area are *Birds of North Carolina* (Pearson, Brimley, and Brimley, revised 1959), and *South Carolina Bird Life* (Sprunt and Chamberlain, 1948). By the way, the

Charleston Museum is planning to reissue the South Carolina book early in 1969 with a supplement containing all records added in the 20 years since its original publication. Watch for details later in the *Chat*. For field travel itself, Pettingill's 1951 edition of *A Guide to Bird Finding East of the Mississippi* is still useful in both states, although it is somewhat outdated and omits many excellent spots.

Next in importance after field guides are the topographic and road maps available for our states. Serious field work of any sort almost demands the use of maps of one sort or another, and our area is well blessed in the variety and availability of such maps. Perhaps the most useful are the county road maps published by both states. These show all roads and indicate the location of prominent geographic and cultural features. In South Carolina these and many other useful maps may be obtained from: Traffic and Planning Engineer, S.C. State Highway Department, P.O. Box 191, Columbia, S.C. 29202. In North Carolina, write to: State Locating Engineer, State Highway Commission, Raleigh, N.C. 27602. Both offices will furnish you with a list giving the description and prices of all available maps. Even if you never get into the field except for an occasional Christmas or Spring Count, you will find that a map of your own county will greatly enhance your enjoyment of birding. For those who want a closer look at the land, topographic maps are a must. You can order excellently detailed maps for both states by writing to: Tennessee Valley Authority, Maps and Engineering Records Section, 102-A Union Building, Knoxville, Tennessee. TVA will supply you with order blanks and price lists as well as the name and address of stores which sell the maps across the counter.

Snatches

Bill Sharpe, editor of *The State*, informs us that the Glossy Ibis has increased noticeably on the Outer Banks recently. He states that the birds are often seen during the summer along N.C. 12 from Manteo to Ocracoke.

* * *

Having trouble locating books on birds, plants, mammals, conservation, and other nature subjects? Then write to Pierce Book Company, Winthrop, Iowa 50682. Mr. Pierce has the most extensive listing of books on nature available in the U.S.; and his speciality is bird literature. He can get any book in print; and his company is outstanding for locating old, out-of-print, and rare books. In addition, they handle a large number of major journals as well as the various bird song and nature recordings.

* * *

If you know the whereabouts of any blackbird-starling winter roosts, please get in touch with us. Hopefully we can map out the exact extent of the wintering population in our area. The U.S. Fish and Wildlife Service informs us that North Carolina has the greatest number of these birds for any state on the Atlantic seaboard, but the location of many roosts is unknown.

CONSERVATION

AND THE CAROLINAS

MARIE B. MELLINGER, *Department Editor*

The Conservation See-saw

Riding a see-saw, with its sudden ups and downs, was part of childhood's fun. But the word see-saw has been adapted to many fluctuating situations. It is especially adaptable to the conservation picture at this time. Every time those organizations and individuals dedicated to conservation feel that they have made a major advancement, some discouraging setback seems to occur.

The status of the Okefenokee as a wilderness area is still undecided. So far, Congressman Stuckey has failed to introduce necessary legislation for its enactment, although he continues to promise to do so. Senators Russell and Talmadge decline to introduce the Okefenokee Wilderness Bill as "too controversial to have their names attached."

On 18 June, the House Public Works Committee approved a bill relieving highway engineers of legal restraint against road invasion of public parks, recreation areas, refuges, and historic sites. This opens the way for the bulldozers, for roads to be built through these areas. Hopefully, so far, the Senate has stood firmly against weakening of the earlier bill protecting such areas from road invasion. There has also been proposed legislation to eliminate the roadside beautification projects and to slash funds for such projects.

There has been some expressed concern that Secretary Udall may again reverse his decision on the transmountain road across the Smokies. Permitting this road to be built would be a tragedy for the wilderness areas of the Great Smokies.

Ernest Swift, one of the greatest conservation writers of our time, in *Conservation News*, 1 July 1968, has suggested that outdoor magazines are lukewarm, or at best, neutral, in backing sound conservation practices. He states "pollution could be one of the greatest crusades that outdoor magazines could tackle."

The non-political National Wildlife Federation suggested that both political parties incorporate conservation planks in their platforms curtailing water, noise, and air pollution, control of waste disposal, and curbing of use of chemical poisons.

Lest you think the see-saw is all down, and no up, we can report that the Whooping Crane eggs arrived safely at Patuxent, and six young birds hatched. This is part of a planned program to build up a propagating flock of cranes and to eventually release young birds to bolster the wild population that winters on Aransas Refuge, Texas, and breeds in Canada's Wood Buffalo Park.

An interesting account in *Conservation News* tells of 4,000 teenagers who took part in 50 different conservation projects across the country, developing guidelines in areas of environmental improvements, for other teenagers to carry out. * * * Tennessee has become the first state to establish a comprehensive scenic rivers system, recently signed into law by Gov. Buford Ellington. On 6 July a unique canoe race was held on the Big South Fork of the Cumberland to focus attention on the need to maintain this as a free flowing river. * * * Norman C. Smith has taken over as new president of the Georgia Conservancy. The Conservancy, along with the Georgia Sportsmen's Federation, are attempting to head off proposed phosphate mining operations along Georgia's

seacoast. Such mining operations would not only destroy much of the salt water marshes, but continued mining and dredging might affect the entire ecology of the seacoast from Florida to Virginia.

Ernest F. Swift, 1897-1968

The *Conservation News* of 15 August 1968 recorded the death of Ernest F. Swift, pioneer conservationist and writer. We can only echo the words in the *Conservation News*: "... this nation is better because he lived here and spoke out for those things in which he firmly believed. Every time a victory is won in the never-ending battle for the wise use and management of our natural resources, we will know that he helped win it. — For Ernest Swift, conservation was always a crusade, a way of life to be shared with others."

1967 Breeding Bird Survey

The Preliminary Report on the 1967 Breeding Bird Survey has recently been issued from the Migratory Bird Populations Station at Patuxent, Maryland. This survey is conducted by helpful birders who drive for miles making 50 three-minute stops to list birds seen and heard. A summary of the collected data shows whether the populations of individual species are increasing or decreasing. There was an overall increase of Eastern Phoebes and Dickcissels, and a decrease in Eastern Bluebirds in their breeding range east of the Mississippi. There was a decrease in Bobwhites, Cardinals, and Eastern Meadowlarks for the Carolinas. Of course, individual increases or decreases may be attributed to a late migrating season, or extremes of drought or rain. Accumulated data over years should prove significant. Data is processed electronically at the Migratory Bird Populations Station and made available, especially to the regional editors of *Audubon Field Notes* for their reports on the breeding season. It is recommended that many more qualified observers join in taking these surveys. State coordinators for North and South Carolina are Robert P. Teulings and T.A. Beckett III.

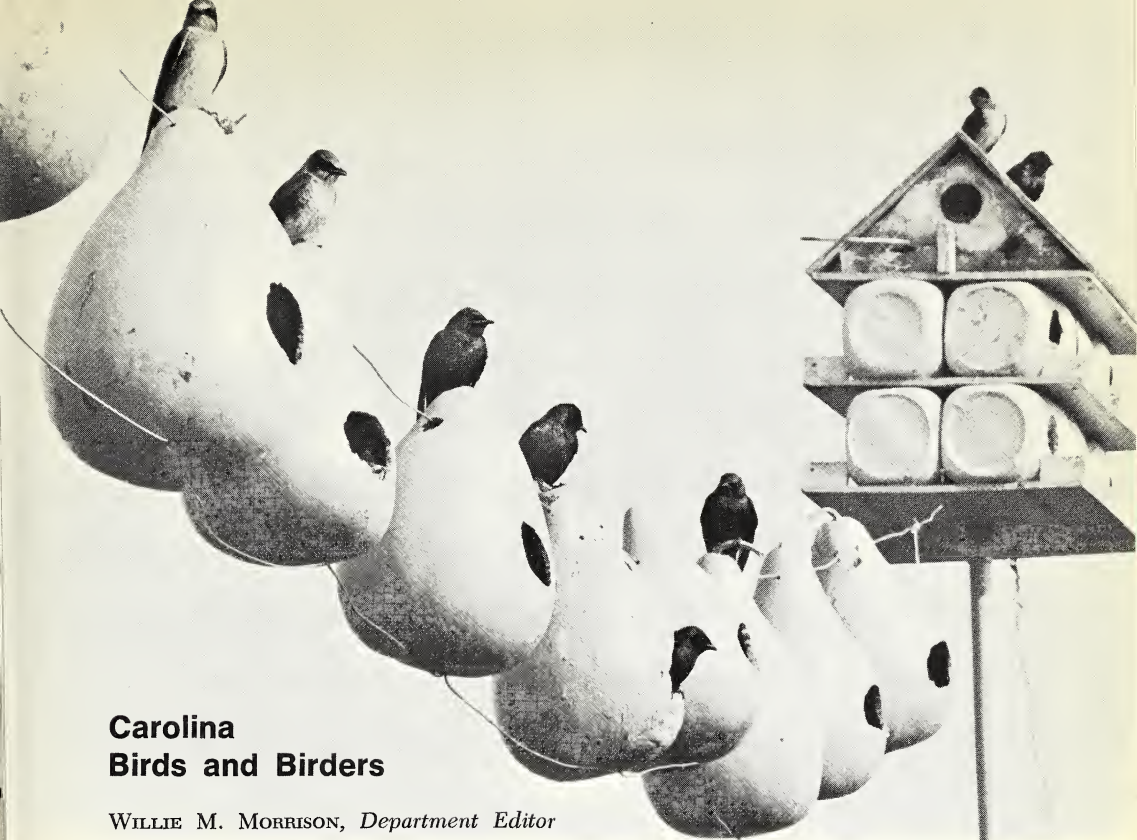
Lucifer Litterbug Runs Rampant

Lucifer Litterbug, his wife Lutetia, and their offspring seem to be overpopulating the land, and rapidly becoming our most persistent and dangerous insect pests. A recent photo in the Anderson, S.C., *Independent* showed an anti-litter sign—"maximum fine of \$50.00"—completely surrounded by discarded debris, as if the people dumped their litter there in direct defiance of the law. Perhaps we need another type of legislation.

In response to a previous column on litterbugs, a northern doctor visiting Tryon, N.C., wrote a letter in which he stated: "I feel compelled to write you relative to the litterbug problem. I agree that the Carolinas show evidence of a major problem along their highways. In South Dakota we have a litterbug law with a fine of \$100.00. The State Game and Fish and Parks personnel, Game Wardens, and Highway Patrol are all empowered and urged to make arrests. The lower court judges have been urged to impose heavy sentences for littering. In most cases brought to court the judge sentences the offender to two or three days of picking up rubbish on a lake shore or along a certain stretch of highway. This is given publicity in the papers and has a much better effect than a fine that many simply laugh off. The publicity is embarrassing and has a salutatory effect."

Mrs. Mildred S. Parker, anti-litter chairman of the National Council of Garden Clubs, writes that "people often think of clean up campaigns as benefiting our communities, our states, and our nation, and not in terms of making our personal lives more pleasant. Litter, and the ugliness it brings, isn't somebody else's problem, it's ours."

We especially approve and applaud the Atlanta lady on a recent Conservancy trip, who, while everyone else deplored litter along the trail, quietly got a container and started picking it up. May we have a million more just like her!



Carolina Birds and Birders

WILLIE M. MORRISON, *Department Editor*

Martins in My Garden

It has been my good fortune to have Purple Martins nest over my garden for about seven out of the ten years that I've been at Wingate College. Initially I attracted about three pairs with 10 gourds which were given me by a friend. Gourds initially seem to be more attractive to martins than multi-storied houses. I construct houses from gallon milk cartons which serve some brooding couples in addition to my gourds, and also provide roosting quarters for emerging young birds. This year all 10 of my gourds were occupied by breeding pairs, and also about 10 of my 30 milk carton quarters were occupied. Four cartons were occupied by House Sparrows, and one by a Starling couple. This was the first year that Starlings have occupied an apartment in my martin colony. They lasted for only one brood, however, for which I was glad. Martins seem to addle Starlings by their intense activity. Sparrows, however, happily endure the commotion and raise several broods. Martins also nest with Tree Swallows in the northern United States and Canada.

As is well known, martins usually return year after year to their place of origin after their migration to the Amazon region. I try not to put up a gourd pole or string before early March, so as not to give the sparrows too much head start. Nevertheless, sparrows have completed their first brood before martins have finished wrangling among themselves as to who occupies which quarters. Upon seeing the first scouts on about 15 March, I pull out my gourds and houses and lay them on the ground. Both martins and sparrows recognize their old quarters and will light on them while they are still lying flat on the ground. One season I erected my houses a month later than usual. Even though some

of my neighbors compete with me to see who gets the most martins, I still retrieved most of my old ones that year.

You can take them with you—a mile or two at least! Last year I moved to a new home, about a mile away. At my new home I erected precisely the same rig that I had at my old one: martins were on it before I had tightened the guy wires, apparently recognizing old living quarter design. The old location was doubtless their first choice, but was not critical in selection.

A 1½-inch iron water pipe about 10 feet long has served well as a support for the living quarters. I mount the pipe on a fence post so that no iron comes within 3 feet of the ground. My idea is that iron will be cat repellent, and the fence post will not attract lightning as would iron touching the ground. Three equally spaced guy wires with insulators on them have supported the assembly against very high winds. A bamboo pole is my first choice when gourds only are being supported. The nesting quarters should be cleaned each year of any remains of old sparrow nests, otherwise martins will not occupy them. To prepare a gourd for use I cut holes out with a small, cylindrical hole saw and make an elliptical hole about 5 inches wide and 2½ inches high. This enables me to easily place my hand into the gourd for cleaning, and martins also appear to prefer such large holes. Milk cartons, if used for multi-roomed houses, should have their interiors darkened by sloshing thin black paint around in them. All quarters should have pencil-sized drain holes in them. At least 8 or 10 gourds should be used for a colony, otherwise sparrows will occupy too many rooms to leave the gregarious martins happy.

While martins are present, I never spray my garden or use dust except for occasional aphids. These birds are efficient in keeping beetles and other day-flying insects down to very low populations in the vicinity of their colony. I hardly think that it is a coincidence that bean beetles and asparagus beetles become very troublesome, but only after the martins leave in migration in mid-August. Insects whose activities are restricted to the night are apparently not controlled to any great extent by martins. Tip moth infestation of pines in my vicinity has apparently fallen to a very low level, however, since the martin colony has been initiated in this area.

I am fascinated by the instinct, if indeed it is instinct, of martins to chase predators. Shrikes, crows, jays, and hawks are prime objects of pursuit along with dogs and cats. Also their frolicking, diving, graceful flight, and groupings are interesting in early morning and late evening.—JAMES S. FLETCHER, Box 62, Wingate, N.C., 30 July 1968.

[The above statements regarding the feeding habits of martins agree with the report of Irston R. Barnes (Purple Martins Ignore Mosquitoes, *Atlantic Naturalist*, 23:75-77) to the effect that sellers of martin houses have made misleading claims about the consumption of mosquitoes by these birds. Citing a paper presented by Herbert W. Kale II at the 1967 A.O.U. meeting, Barnes concludes that while martins do on occasion consume mosquitoes, they "forage chiefly in the daylight hours, when mosquitoes are . . . inactive", and "... as selective feeders, the martins favor the larger insects."—Ed.]

Osprey vs. Kite

A large kite that looks very much like a bird was being flown on the beach when an Osprey circled way overhead, and then dove screaming on the kite, and tore it to pieces. Triumphant Osprey, shattered kite!—MRS. J.G. NEWHALL, Hilton Head, S.C., 3 May 1968.

Notes from Mrs. Coleman

Mrs. Robert H. Coleman, 774 Ft. Sumter Drive, Charleston, S.C., is Editor of *The Lesser Squawk*, lively bulletin of the Charleston Natural History Society.

She has kindly given me permission to use items of interest to *Chat* readers, and will also act as a correspondent from her region, sending additional records from time to time.

Mrs. Coleman's letter continues: "On June 6th a sick or wounded Sooty Tern was found in Dorchester Terrace, a rather congested subdivision of North Charleston, several miles from the sea, and brought to our artist member, Anne Richardson. Unfortunately it died on June 7th. On June 20th, my son, Robert, Jr. and I had a good view of a Gray Kingbird on the Isle of Palms. The Gray Kingbird is not rare but uncommon in this area. On June 23rd, Robert and Teague Coleman observed a large number of Greater Shearwaters about 25 miles off shore. These ocean birds are not unusual off our coast but previous records give August as their earliest date. Both these men are competent and careful observers and had good views with 8x binoculars."

Dr. Alan Bills of Summerville, S.C., wrote as follows in the May issue of *Lesser Squawk*: "On March 17, my wife spotted what she thought was a Pine Grosbeak on our feeder in the morning: I confirmed this sighting later on that same day. The bird was a male in full plumage and was apparently eating sunflower seeds. He was on our feeder with five or six Chipping Sparrows, so we were able to compare his size and to eliminate the possibility of his being a Purple Finch. He was at least 2x the size of the sparrows. My wife and her father sighted him again on March 18, but we have not seen him since."

Mrs. Coleman comments: "The Pine Grosbeak is rare in this area but was definitely identified on a bird count two years ago, thus making Dr. Bills' observation quite probable. I fear that the so-called experts are a skeptical breed, so be sure to get someone to back up your sighting of a rare species."

"Francis Barrington says that on the morning of April 10 he saw a large flock of Common Loons alight on the Stono River just off the end of his dock. He counted between 90 and 100 birds, apparently sitting out a heavy fog before continuing what must have been their northward migration."—*Lesser Squawk*, May 1968.

"Anne Richardson, Charleston bird artist, reports that three pair of Black-necked Stilts are nesting on Drum Island and that Stanley Langston has taken some pictures of the birds and their nests."—*Lesser Squawk*, June 1968.

[Those who attended the Friday evening meeting of the Carolina Bird Club at Mt. Pleasant, 26 April 1968, will remember Mr. Langston's beautiful slides of Bull and Drum Islands.—DEPT. Ed.]

A Stranger in Our Midst

During the first week of April 1968 the "birders" of Hartsville, S.C., were excited by reports of an unusual bird, possibly a fancy pigeon or some type of game bird. Early the morning of 8 April, Mrs. J.M. Richardson, 1713 Lakeshore Drive, came to my house with the curious bird in a brown paper bag. It had been brought to her earlier by a neighbor's son, Joe Allston. He had gone to feed his bird dogs, when, all of a sudden, this strange bird fell onto the ground. Thinking that it was one of the Richardsons' pigeons which had escaped from the loft, he had captured it.

When I saw the bird it was quiescent and seemed in a semi-stunned condition resting silently in the bottom of the bag. I lifted it gently for better observation of the distinctive head, cheeks, throat and breast markings, rosy-pink bill, and sturdy legs and feet of the Chukar. Approximately a dozen dark prominent vertical flank bars were the most conspicuous markings on the body of the partridge in contrast to the dark and light dove-grey back and belly. These head, breast and flank markings are added protection against predators because they break up the outline of the body, enabling it to blend into the surrounding rocks and vegetation, according to the *Encyclopedia Americana* (1966, Vol. 21, pages 358-359).

Without any flutterings, the Chukar suddenly came to life, flew out of my hands, and ran into my neighbor's yard. After a wandering walk around in the bushes with the two of us making grabs at every opportunity, the bird got a running start and flew swiftly towards Prestwood Lake. All the reported sightings have been at the lake or within a block of the water.

In the Golden Nature Guide *Gamebirds*, by Alexander S. Sprunt IV and Herbert S. Zim (1961, page 150), Chukars are said to need open rocky country. Introduced birds have become acclimated out West, nesting near available water. I was told at the recent CBC meeting that Chukars have been imported to some of the hunting preserves of the South Carolina Low Country, but that the climate apparently is unsuitable for this Eurasian species to become established in the wild.—WILLIE M. MORRISON, 1610 Home Avenue, Hartsville, S.C., 29 June 1968.

Birds of a Feather?

A happy way to entertain restless grandchildren visiting Hartsville, S.C., is to take them to the north shore of Prestwood Lake, near the causeway, to "feed the ducks." On 18 June 1968, I noticed that a new flock of domestic geese had arrived, staying more or less to themselves. Among them was one Canada Goose—a most unusual sight for South Carolina in the summertime!—WMM

BOOK REVIEW

ANIMAL SPECIES AND EVOLUTION by Ernst Mayr, Cambridge, Massachusetts: Harvard University Press, 1963. 797 p. \$11.95.

Evolution has frequently been called "the greatest unifying theory in biology," and Ernst Mayr's monumental work provides a brilliant synthesis and contribution to our knowledge of the processes and patterns of speciation. Mayr brings together an exhaustive compilation of data from all fields of biology—population genetics, molecular biology, ecology, biochemistry and physiology, behavior, systematic zoology and botany, and his own original specialty of ornithology. *Animal Species and Evolution* is more than a mere resume, however, for Mayr elaborates and expands his own original contributions to the field, particularly with regards to the nature of the gene pool. A list of chapter headings gives the most accurate picture of the content and extent of the work: Evolutionary Biology; Species Concepts and Their Application; Morphological Species Characters and Sibling Species; Biological Properties of Species; Isolating Mechanisms; The Breakdown of Isolating Mechanisms (Hybridization); The Population, Its Variation and Genetics; Factors Reducing the Genetic Variation of Populations; Storage and Protection of Genetic Variation; The Unity of the Genotype; Geographic Variation; The Polyploid Species of the Taxonomist; The Population Structure of Species; Kinds of Species; Multiplication of Species; Geographic Speciation; The Genetics of Speciation; The Ecology of Speciation; Species and Transpecific Evolution; and Man as a Biological Species.

Mayr's classic thesis is that subspecies are not incipient species unless they become geographically isolated from the rest of the given population. Once two populations of a given species cease to interbreed, due to geographic isolation, they can respond to differences in selective pressures and undergo divergent radiation into two new species, assuming that they remain apart for a sufficient length of time to build up adequate isolating mechanisms. *Animal Species and Evolution* is devoted primarily to documentation and elaboration of this theory, with a vast body of evidence drawn from many fields to posit plausible mechanisms for the observed phenomena. The text is closely paralleled by numerous drawings, (Continued on page 81)

SPRING BIRD COUNT—1968

ELOISE F. POTTER

Participants in the 1968 Spring Bird Count in North and South Carolina tallied 64,771 individuals of 226 species, considerably less than in the record-breaking year of 1965 when 246 species were recorded. The relatively low total number of species may be attributed, at least in part, to the fact that there was rain in over half the localities on the count day. Wilmington led in total species with 153, followed by Greensboro (146), Raleigh (140), and Stanly County (135). Greensboro recorded the largest number of individual birds, some over 10,000, followed by Wilmington (over 8,000) and Raleigh (over 6,000).

The 20 count areas were fairly well distributed across the two states: three on the coast, four in the coastal plain, ten in the piedmont, and three in the mountains. All counts were made between 20 April (Charleston) and 26 May (Rocky Mount), with the large majority coming during the first two weeks of May.

The count table has a "streamlined" format which the Editor hopes will be easily interpreted by the readers and readily adapted to the ever-increasing number of local count areas. (For further explanation, please see Editorial.) Outstanding observations are, as usual, noted below in the local summary paragraphs. Anyone needing to refer to the full tabulation of local lists is invited to write the Editor.

COAST

MOREHEAD CITY, N.C. (center: Crab Point intersection)

5 May; 5:00 AM to 6:00 PM.

Weather: overcast, intermittent light rain; temp. 65-73 F; wind variable, 5-10 mph. Six observers in 4 parties. Total party-hours, 33; total party-miles, 141.

Total species, 120; total individuals, 4,310.

COMMENTS: The *White Ibis* and *White-rumped Sandpiper* were seen on the Morehead-Beaufort causeway by Chapman and Hon.

OBSERVERS: Frank Chapman, John O. Fussell Jr., John O. Fussell III, Will Hon, Charles Lincoln, J.R. Spears.—John O. Fussell III, Box 520, Morehead City, N.C.

WILMINGTON, N.C. (center: Myrtle Grove Junction)

4 May; 5:00 AM to 7:00 PM.

Weather: temp. 54-76 F; wind SW, 5-21 mph.

Nineteen observers in 6 parties. Total party-hours, 64; total party-miles, 370.

Total species, 153; total individuals, 8,046.

COMMENTS: *American Golden Plover* (MB and GG) was on River Road near Carolina Beach. *Stilt Sandpiper* (PM) was at Myrtle Grove Sound.

OBSERVERS: Edna Appleberry, Mike Browne, Derb Carter, Jay Carter, Dot Earle, Dave Emery, Gilbert Grant, William Green, Kitty Kosh, Billy McEachern, Polly Mebane, Darryl Moffett, David Musser, Frances Needham, Lou Overman, James Parnell, Bob Teulings, Elizabeth Teulings, Mary Urich.—Dot (Mrs. Sam) Earle, 428 Causeway Drive, Wilmington, N.C.

CHARLESTON, S.C. (center: 32° 57' N, 79° 41.6' W)

20 April; 6:30 AM to 4:15 PM.

Weather: clear, dry; temp. 63-93 F; wind light, variable.

Seven observers in 3 parties. Total party-hours, 24; total party-miles, 115.

Total species, 101; total individuals, 2,104.

OBSERVERS: Frances Brewster, E.B. Chamberlain, Ruth Clements, Mrs. R.H. Coleman, E.A. Cutts, Richard Gingrich, David Yount.—E.B. Chamberlain, Box 3039, St. Andrews Branch, Charleston, S.C.

COASTAL PLAIN

BEAUFORT COUNTY, N.C. (center: where Upper Goose Creek enters Pamlico River in central Beaufort Co.)

5 May; 6:45 AM to 6:30 PM.

Weather: rain in morning; showers, cooling in afternoon; temp. 61-69 F; wind N, 0-10 mph.

Three observers in 1 party. Total party-hours, 11; total party-miles, 88.

Total species, 74; total individuals, 1,296.

OBSERVERS: Geraldine Cox, Brenda Turnage, Marvin Turnage.—Geraldine Cox, Bayboro, N.C.

PAMLICO COUNTY, N.C. (center: in Florence at intersection of 1324 and 1329)

4 May; 6:30 AM to 7:00 PM.

Weather: fair in morning, thunderstorms most of afternoon; temp. 63-83 F; wind SW, 0-20 mph.

Three observers in 1 party. Total party-hours, 12; total party-miles, 78.

Total species, 76; total individuals, 1,149.

OBSERVERS: Geraldine Cox, Brenda Turnage, Marvin Turnage.—Geraldine Cox, Bayboro, N.C.

ROCKY MOUNT, N.C. (center: Battleboro)

26 May; 5:00 AM to 6:30 PM.

Weather: fair to partly cloudy; temp. 60-75 F; wind NE, 10-15 mph.

Seven observers in 2 parties. Total party-hours, 60; total party-miles, 208.

Total species, 80; total individuals, 2,846.

COMMENTS: The *Marsh Hawk* and *Song Sparrow* are late for this area. The flock of 5 *Worm-eating Warblers* are extremely late in migration.

OBSERVERS: Joyce Bennett, Stephen Bennett III, Bettie Davis, Carr Speight, Sarah Speight, John L. Thompson.—John L. Thompson, Rocky Mount, N.C.

EASTOVER, S.C. (center: railroad station, Eastover)

4 May; 7:00 AM to 7:00 PM.

Weather: clear; temp 60-86 F; wind W, 5 mph to NW, 12 mph.

Two observers in 1 party. Total party-miles, 25.

Total species, 70; total individuals, 991.

COMMENTS: One *Mississippi Kite* seen over pond near Wateree indicates a possibility of nesting.

OBSERVERS: Annie R. Faver, Mrs. Clyde Sisson.—Annie R. Faver, Eastover, S.C.

PIEDMONT

HENDERSON, VANCE COUNTY, N.C. (center: Henderson)

4 May; 7:30 AM to 3:30 PM.

Weather: clear in morning, cloudy with light showers in afternoon; temp. 50-85 F; wind about 5 mph.

Eleven observers in 2 parties. Total party-hours, 8; total party-miles, 43.

Total species, 76; total individuals, 1,138.

OBSERVERS: Neita Allen, Augustus W. Bachman, Mrs. A.W. Bachman, Annie G. Burroughs, Mrs. Walter Dallas, Mrs. E.W. Gierische, Mr. and Mrs. Herbert Huggins, Garnette Myers, Dr. and Mrs. Paul Stewart (Oxford, N.C.).—Miss Annie G. Burroughs, Greystone Apartments, Young Avenue, Henderson, N.C.

RALEIGH, N.C. (center: State Capitol)

4 May; 5:00 AM to 7:30 PM.

Weather: light overcast to clear most of day, rain for half hour in afternoon; temp. 55-85 F; wind practically calm except during rain.

Fifty-four observers in 14 parties. Total party-hours, 126.5; total party-miles, 329.5.

Total species, 140; total individuals, 6,601.

COMMENTS: *White-rumped Sandpiper* (MB) was seen 2 May.

OBSERVERS: Dot Bates, Mrs. Norman Bell, David Bradshaw, Mr. and Mrs. Charles Bryan, J.W. Chalfant, John Coffey, John Coffey II, Nelson Coffey, Danny Coffey, Myrtle Cotner, Mrs. James Cox, John Coxe, Ann Davis, Harry T. Davis, Charlotte Green, Mrs. Z.B. Greene Jr., R.J. Hader, Dr. and Mrs. William Hatheway, Arnold Hoffman, Mrs. Vance Huneycutt, Esther Ivey, Mabel Jones, Mr. and Mrs. William Joslin, Mr. and Mrs. John Lamson, Joshua Lee, Edmund LeGrand, Harry LeGrand Jr., Charles Leibrandt, Carl Leibrandt, Dale Lewis, F.B. Meacham, Edna Miller, Dr. and Mrs. T.L. Quay, Dr. and Mrs. John Rhodes, Edith Shanklin, Mary Showalter, Gwenn Turbiville, Mr. and Mrs. Eugene Upchurch, Burt van der Vaart, Gilda Warner, Elizabeth Watson, Harriet Wilson, Mr. and Mrs. E.W. Winkler, Dr. and Mrs. David L. Wray.—Dr. David L. Wray, 510 Dixie Trail, Raleigh, N.C.

CHAPEL HILL, N.C. (center: intersection of Columbia and Franklin Streets)

5 May; 5:00 AM to 6:00 PM.

Weather: partly cloudy; temp. 47-78 F; wind light.

Twenty-five observers in 10 parties, plus 7 individuals working own yards. Total party-hours, 53; total party-miles, 119.

Total species, 107; total individuals, 4,481.

OBSERVERS: Dale and Alma Beers, Charles and Helen Blake, Louise Crumpacker, John and Bruce Filley, Susan and Ashby Fristoe, Robert Geist, Claude George, Francis and Jean Harper, Alexander Hull, Logan and Elinor Irvin, Stella Lyons, Gerald and Elizabeth MacCarthy, Wallace Patterson, Johnnie Payne, James Pullman, Phillips Russell, Robert Sharpe, Jean Stewart, Wilma Stuart, Robert and Elizabeth Teulings, Adelaide Walters, James and Pauline Wearn, Josephine Weedon.—Robert and Elizabeth Teulings, Route 2, Chapel Hill, N.C.

GREENSBORO, N.C. (center: ½ mile SW of WBIG transmitter)

4 May; 6:00 AM to 7:30 PM.

Weather: mostly fair to partly cloudy with afternoon showers; temp. 60-80 F; wind NNW, maximum 17 mph during shower.

Thirty-four observers in 12 parties. Total party-hours, 95; total party-miles, 367.5.

Total species, 146; total individuals, 10,191.

OBSERVERS: Dr. and Mrs. Donald F. Allen, John T. Austin, Rose K. Avery, Mrs. J.R. Beaman Jr., Mrs. J.F. Benson, David Burney, John W. Carr, Inez Coldwell, Larry Crawford, Mr. and Mrs. G.W. Daniels, Charlotte Dawley, Jean F. Gertz, Howard H. Groover, Sidney Holmes, Mrs. B.S. Lambeth Jr., Robert L. Lasley, Mrs. E.R. Lyon Sr., James Mattocks, Mrs. R.E. McCoy, Ethel McNairy, Ida Mitchell, Mrs. David Parsons Jr., Mrs. George W. Perrett, Etta Schiffman, Mrs. A.D. Shaftesbury, George A. Smith, Mrs. W.F. Smyre, Thomas E. Street, Mrs. C.R. Surratt, Mrs. Darl G. Tipton, Mrs. Ralph H. Weisner, Helen J. Zuk.—Howard H. Groover, 2406 Madison Avenue, Greensboro, N.C.

WINSTON-SALEM, N.C. (center: intersection of I-40 and Silas Creek Pkwy)

28 April; 5:30 AM to 8:30 PM.

Weather: partly cloudy to cloudy; temp. 52-70 F; wind W, 5-15 mph.

Twenty-eight observers in 9 parties, plus 2 individuals working own yards. Total party-hours, 82; total party-miles, 240.

Total species, 135; total individuals, 4,976.

COMMENTS: *Cliff Swallows* reported by four parties, unusual in our area. [Has anyone looked for nests around major reservoirs?—ED.] *Long-billed Marsh Wren* (FH, RH, CS) is new for count area. Two *Nashville Warblers* (RS and R. Hill), also new for count area, were watched closely in good light for several minutes.

OBSERVERS: Grace Cole, Yel Cowherd, Charles Frost, Gardner Gidley, Gary Gidley, Margaret Gidley, Fred Hill, Page Hill, Ruth Hill, Royce Hough, Wayne

Irvin, Martha Killam, Dwight Lee, Polyanna Lee, Jane Odear, Robert Odear, Jackie Shelton, Dorothy Shiffert, Jerry Shiffert, Ramona Snavelly, C. Sommer, Nancy Sommer, Becky Spinks, Edie Spinks, Peggy Stamey, Myron Vourax, Elizabeth Whitever, Robert Witherington.—C. Royce Hough III, 532 Walter Court, Winston-Salem, N.C.

STANLY COUNTY, N.C. (center: about 2 miles NW of Badin)

27 April; 5:30 AM to 6:30 PM.

Weather: temp. 56-78 F; wind SW, 6 mph.

Twenty-one observers in 8 parties, plus 16 individuals working own yards. Total party-hours, 73; total party-miles, 122.

Total species, 119; total individuals, 5,171.

COMMENTS: Two *Upland Plovers* (VC, VW) seen 29 April are new for area. *Brewer's Blackbird* (VC, AH), studied carefully in cattails at edge of small lake, is also a first for the area. Pileated Woodpeckers are more plentiful than usual; Eastern Bluebirds are about the same in rural areas.

OBSERVERS: Roy Blalock, Erin Blalock, Myrtle Culp, Pauline Culp, Barrett Crook, Vera Crook, Ervin Eudy, Francis Eudy, Virginia Foglia, Joe Ferebee, Henry Goforth, Naomi Goforth, Mary Ellen Goforth, Connie Hamilton, Louise Hammill, Louis Hartung Jr., Gertrude Hartung, Lectie Harwood, Ann Hatley, Claude Hinson, Nelle Hinson, Jean Huneycutt, Maxine Isenhour, Janie Kimrey, Cindy Lowder, Doris Mauney, James Mauney, Annie Misenheimer, Harold Morris, Helen Mount, Ann Olsen, Spencer Plyler, Nana Sweaker, Addie Thompson, John Whitlock, Vivian Whitlock, Bennie Winget.—Vera (Mrs. Barrett) Crook, Route 2, New London, N.C.

CHARLOTTE, N.C. (center: intersection of US 21 and Woodlawn Road)

10 May; 5:00 AM to 8:00 PM.

Weather: sunny in morning, heavy showers in late afternoon; temp. 50-75 F; wind variable.

Ten observers in 5 parties, 1 individual working own yard. Total party-hours, 42; total party-miles, 205.

Total species, 103; total individuals, 4,042.

COMMENTS: Two *Cattle Egrets* and the *Glossy Ibis* (Mrs. Cobey) were most unusual. Migrant warblers were mostly lacking. Common Grackles and *Grasshopper Sparrows* were more abundant than usual.

OBSERVERS: Mrs. M.J. Barber, Jimmy Bookout, Mrs. E.O. Clarkson, Dr. and Mrs. Bill Cobey, J.P. Hamilton, Dr. Mayer, Charles Moore, Doug Pratt, Bill Smith, Joan Templeton.—Doug Pratt, Route 3, Box 113L, Charlotte, N.C.

GREENVILLE, S.C. (center: intersection Hwy 29 and 291)

4 May; 7:00 AM to 9:00 PM.

Weather: mostly fair with showers; temp. 45-70 F; wind light.

Four observers in 2 parties, plus 5 individuals working own yards. Total party-hours, 9; total party-miles, 40.

Total species, 82; total individuals, 748.

OBSERVERS: Ruth Gilreath, Gladys Hart, Rosa Lee Hart, Mamie Kanaley, Martha Lawrence, Beatrice Merritt, May Puett, Lee Watson, Richard Watson.—Rosa Lee Hart, Travelers Rest, S.C.

PIEDMONT, S.C. (center: intersection of I-85 and Hwy 8)

11 May; 5:00 AM to 8:00 PM.

Weather: cloudy with rain; temp. 45-75 F; wind SSE, light.

Three observers in 1 party. Total party-hours, 15; total party-miles, 125.

Total species, 82; total individuals, 1,787.

COMMENTS: Pied-billed Grebe and Blue-winged Teal were in a newly-built

lake. *Eastern Phoebe* had four young in the nest; *Horned Lark* was feeding immature young; *Barn Swallow* was incubating 4 eggs.

OBSERVERS: Michael Anderson, Neal Anderson, Carl Garrison.—Carl Garrison, Route 4, Box 228, Easley, S.C.

ANDERSON, S.C. (center: Anderson Airport, as in previous years)

4 May; 5:00 AM to 6:00 PM.

Weather: clear in morning, cloudy with showers in afternoon; temp. 55-77 F; wind calm except during showers.

Ten observers in 3 parties. Total party-hours, 26; total party-miles, 130.

Total species, 118; total individuals, 2,461.

COMMENTS: This is the second spring count on which the *Nashville Warbler* (AMT, CW) has been found, but it still must be considered quite unusual.

It was in deciduous woods feeding low in a sweet gum. The Snowy Egret (RCT, AMT) found during the count period was at Lake Hartwell.

OBSERVERS: T.W. Edwards Jr., Mary Lange Edwards, Gaston Gage, Ruth Gage, Joan Geiger, Roland Geiger, Susan Geiger, Adair M. Tedards, R. Connor Tedards, Caroline Watson.—Adair M. Tedards, 207 Brown Road, Anderson, S.C.

MOUNTAINS

ASHE COUNTY, N.C. (center: Hurt farm house near Crumpler)

5 May; 6:15 AM to 7:00 PM.

Weather: cool, clear; temp. 35-50 F; wind NW, up to 12 mph.

Six observers in 2 parties. Total party-hours, 18.75; total party-miles, 133.5.

Total species, 84; total individuals, 825.

OBSERVERS: Mrs. Banner Blevins, Mrs. A.B. Hurt, Mrs. Beulah Kiser, Kim Koontz, Mrs. Roland Koontz, Wendell P. Smith.—Mrs. A.B. Hurt, Route 2, Box 101, Crumpler, N.C.

YANCEY-BUNCOMBE COUNTIES, N.C. (center: N.C. 128 at Steepe's Gap)

4 May; 6:00 AM to 6:00 PM.

Weather: cloudy with rain; temp. 45-58 F; wind S, 5-10 mph.

Four observers in 1 party. Total party-hours, 12; total party-miles, 65.

Total species, 51; total individuals, 659.

COMMENTS: Rain and fog prevented field work in about half of count area, thereby eliminating records from the Great Craggy Mountains. The *Sora* was seen at close range at Crabtree Meadows.

OBSERVERS: Doug Pratt, Mark Simpson Jr., Pat Travis, Vaud Travis.—Mark Simpson Jr., P.O. Box 167, Statesville, N.C.

TRANSYLVANIA-JACKSON-HAYWOOD CO., N.C. (center: Shining Rock)

11 May; 6:00 AM to 4:00 PM.

Weather: cloudy with rain, wind calm.

One observer. Total party-hours, 10; total party-miles, 35.

Total species, 79; total individuals, 949.

OBSERVER: Mark Simpson Jr., P.O. Box 167, Statesville, N.C.

1968 SPRING BIRD COUNT SPECIES LIST

<i>Species</i>	<i>Total Individuals</i>	<i>Comments</i>
Common Loon	14	Morehead, 13; Wilmington, 1
Horned Grebe	1	Stanly Co.
Pied-billed Grebe	15	all sections except mountains
Brown Pelican	4	Morehead
Double-cr. Cormorant	38	coast and coastal plain
Anhinga	10	Wilmington, 5; Charleston, 5
Great Blue Heron	56	all sections except mountains
Green Heron	69	all sections except mountains
Little Blue Heron	20	all sections except mountains
Cattle Egret	192	all sections except mountains
Common Egret	95	confined to coast except 3 at Greensboro
Snowy Egret	60	coast and coastal plain; Anderson, *
Louisiana Heron	12	Morehead, 9; Wilmington, 3
Black-cr. Night Heron	21	Morehead, 18; Wilmington, 3
Yellow-cr. Night Heron	11	all sections except mountains
Least Bittern	18	all sections except mountains
American Bittern	4	Morehead, 1; Raleigh, 1; Greensboro, 1; Stanly Co., 1
Glossy Ibis	49	confined to coast except 1 at Charlotte
White Ibis	216	Morehead, 11; Wilmington, 4; Charleston, 201
Canada Goose	37	coastal plain and piedmont; Winston-Salem, 25
Mallard	97	all sections
Black Duck	13	all sections except mountains
Green-winged Teal	1	Anderson
Blue-winged Teal	59	all sections except mountains
American Widgeon	19	Charleston, 2; rest in piedmont N.C.
Wood Duck	73	all sections; Greensboro, 23; Raleigh, 19
Redhead	12	Anderson
Ring-necked Duck	9	Stanly Co., 2; Anderson, 7
Lesser Scaup	78	piedmont only; Greensboro, 55; Anderson, 20
Scaup (sp. ?)	2	
White-winged Scoter	1	Charleston
Ruddy Duck	1	Raleigh
Red-breasted Merganser	7	Wilmington
Turkey Vulture	65	all sections
Black Vulture	12	all sections except mountains
Mississippi Kite	1	Eastover
Sharp-shinned Hawk	6	piedmont and mountains
Cooper's Hawk	6	piedmont
Red-tailed Hawk	38	all sections except mountains
Red-shouldered Hawk	16	all sections except coastal plain
Broad-winged Hawk	15	piedmont and mountains
Marsh Hawk	3	Rocky Mount, 1; Eastover, 1; Henderson, 1; Raleigh, *
Osprey	56	all sections except mountains
Pigeon Hawk	1	Charleston
Sparrow Hawk	20	all sections except coastal plain
Ruffed Grouse	5	Greenville, 2; one from each mountain locality
Bobwhite	801	all 20 localities; most at Greensboro, 140; least at three mountain localities
King Rail	5	Wilmington, 2; Raleigh, 3

*Species seen in count area during count period, but not found on count day.

<i>Species</i>	<i>Total Individuals</i>	<i>Comments</i>
Clapper Rail	50	Morehead, 26; Wilmington, 23; Charleston, 1
Virginia Rail	2	Wilmington, 1; Raleigh, 1
Sora	12	all sections except coastal plain; Yancey-Buncombe, 1
Common Gallinule	24	Wilmington, 1; Charleston, 20; Raleigh, 1; Greensboro, 2
American Coot	90	all sections except mountains
American Oystercatcher	71	Morehead, 34; Wilmington, 31; Charleston, 6
Semipalmated Plover	421	Morehead, 47; Wilmington, 358; Charleston, 15; Rocky Mount, 1
Piping Plover	5	Wilmington
Wilson's Plover	48	Morehead, 13; Wilmington, 35
Killdeer	116	all sections except mountains
American Golden Plover	1	Wilmington
Black-bellied Plover	85	Morehead, 38; Wilmington, 46; Charleston, 1
Ruddy Turnstone	14	Morehead, 12; Wilmington, 2
American Woodcock	21	all sections
Common Snipe	37	all sections except mountains
Whimbrel	43	Morehead, 2; Wilmington, 32; Charleston, 9
Upland Plover	*	Stanly Co.
Spotted Sandpiper	158	all sections except mountains
Solitary Sandpiper	89	all sections; Ashe Co., 3
Willet	217	Morehead, 74; Wilmington, 139; Charleston, 4
Greater Yellowlegs	86	coast and piedmont
Lesser Yellowlegs	53	coast and piedmont
Pectoral Sandpiper	24	coast and piedmont
White-rumped Sandpiper	2	Morehead, 2; Raleigh, *
Least Sandpiper	145	Morehead, 56; Wilmington, 75; Raleigh, 10; Greensboro, 4
Dunlin	510	Morehead, 160; Wilmington, 348; Charleston, 2
Dowitcher (sp. ?)	241	Morehead, 122; Wilmington, 119
Stilt Sandpiper	1	Wilmington
Semipalmated Sandpiper	128	Morehead, 28; Wilmington, 87; Greensboro, 12; Charlotte, 1
Western Sandpiper	24	Morehead, 12; Wilmington, 11; Greensboro, 1
Sanderling	94	Morehead, 36; Wilmington, 58
Great Black-backed Gull	1	Morehead
Herring Gull	689	mostly coastal; Greensboro, 1; Stanly Co., 4
Ring-billed Gull	591	all sections except mountains
Laughing Gull	844	coast and coastal plain
Gull-billed Tern	61	Morehead, 52; Wilmington, 9
Forster's Tern	21	Wilmington
Common Tern	308	Morehead, 83; Wilmington, 225
Least Tern	288	Confined to coast except 3 in Pamlico Co.
Royal Tern	388	Morehead, 47; Wilmington, 334; Beaufort Co., 1; Pamlico Co., 6
Caspian Tern	12	Morehead, 2; Wilmington, 7; Charleston, 3
Black Skimmer	200	Morehead, 115; Wilmington, 82; Charleston, 3
Rock Dove	550	all sections except mountains
Mourning Dove	1816	19 of 20 localities; generally most abundant in central N.C.; scarce in mountains
Yellow-billed Cuckoo	32	all sections
Black-billed Cuckoo	4	Winston-Salem, 1; Anderson, *; Ashe Co., 3
Barn Owl	10	piedmont
Screech Owl	8	all sections except coastal plain

<i>Species</i>	<i>Total Individuals</i>	<i>Comments</i>
Great Horned Owl	9	all sections except mountains
Barred Owl	30	all sections
Saw-whet Owl	*	Transylvania-Jackson-Haywood
Chuck-will's-widow	75	all sections except mountains; most abundant at Wilmington, 32
Whip-poor-will	98	piedmont
Common Nighthawk	65	all sections except mountains
Chimney Swift	1057	19 of 20 localities; most abundant at Greensboro, 201, and Winston-Salem, 170
Ruby-th. Hummingbird	83	all sections; Chapel Hill, 24; Greensboro, 17
Belted Kingfisher	66	all sections
Yellow-shafted Flicker	475	19 of 20 localities
Pileated Woodpecker	53	all sections
Red-bellied Woodpecker	430	19 of 20 localities
Red-headed Woodpecker	118	all sections; most abundant at Wilmington, 28
Yellow-bellied Sapsucker	15	Raleigh, 6; Winston-Salem, 1; Stanly Co., 7; Anderson, 1
Hairy Woodpecker	53	all sections; most abundant in central N.C.
Downy Woodpecker	181	19 of 20 localities; most abundant central N.C.
Red-cockaded Woodpecker	7	Wilmington, 3; Charleston, 4
Eastern Kingbird	373	19 of 20 localities
Great Crested Flycatcher	309	19 of 20 localities
Eastern Phoebe	174	confined to piedmont and mountains except 1 at Rocky Mount
Acadian Flycatcher	124	all sections
Least Flycatcher	4	Raleigh, 1; Winston-Salem, 1; Stanly Co., 1; Ashe Co., 1
Eastern Wood Pewee	171	19 of 20 localities
Horned Lark	38	from Rocky Mount and Raleigh westward throughout piedmont of both states; Transylvania-Jackson-Haywood, 2
Tree Swallow	872	all sections; most abundant at Charleston, 500
Bank Swallow	45	all sections except coastal plain; most abundant at Greensboro, 31
Rough-winged Swallow	199	all sections
Barn Swallow	892	all sections; most abundant at Morehead, 184, and Greensboro, 168
Cliff Swallow	40	Raleigh,*; Greensboro, 1; Winston-Salem, 17; Stanly Co., 12; Anderson, 7; Ashe Co., 3—(Stanly Co. and Anderson birds represent known breeding colonies.)
Purple Martin	798	all sections except mountains; Stanly Co., 264
Blue Jay	1674	all 20 localities; most abundant in piedmont
Common Raven	2	Yancey-Buncombe, 1; Transylvania-Jackson-Haywood, 1
Common Crow	713	19 of 20 localities
Fish Crow	127	coast and coastal plain except 5 at Raleigh and 5 at Charlotte
Carolina Chickadee	620	all 20 localities; most abundant in central N.C.
Tufted Titmouse	601	all 20 localities; most abundant in central N.C.
White-breasted Nuthatch	80	all sections; most abundant at Chapel Hill, 24
Red-breasted Nuthatch	28	Yancey-Buncombe, 13; Transylvania-Jackson-Haywood, 15
Brown-headed Nuthatch	156	all sections except mountains; most abundant in central N.C.

<i>Species</i>	<i>Total Individuals</i>	<i>Comments</i>
Brown Creeper	5	Yancey-Buncombe, 2; Transylvania-Jackson-Haywood, 3
House Wren	92	confined to piedmont except 1 at Morehead and 1 at Wilmington
Winter Wren	45	Greensboro, 1; Yancey-Buncombe, 5; Transylvania-Jackson-Haywood, 39
Carolina Wren	507	19 of 20 localities
Long-billed Marsh Wren	9	all sections except mountains
Short-billed Marsh Wren	3	Raleigh, 2; Greensboro, 1
Mockingbird	1741	19 of 20 localities; most abundant in piedmont
Catbird	486	19 of 20 localities; more abundant in piedmont and mountains than elsewhere
Brown Thrasher	727	all 20 localities; most abundant in piedmont
Robin	1629	all localities except Charleston; most abundant in piedmont
Wood Thrush	887	all localities except Morehead; most abundant in piedmont
Hermit Thrush	8	all sections except mountains
Swainson's Thrush	25	piedmont
Gray-cheeked Thrush	4	piedmont
Veery	39	piedmont and mountains; Raleigh, 12; Transylvania-Jackson-Haywood, 17; other areas 5 or less
Eastern Bluebird	386	18 of 20 localities; most abundant in piedmont, particularly Chapel Hill, 112
Blue-gray Gnatcatcher	273	all sections; most abundant in piedmont
Golden-crowned Kinglet	19	Yancey-Buncombe, 5; Transylvania-Jackson-Haywood, 14
Ruby-crowned Kinglet	51	piedmont and mountains
Water Pipit	10	Piedmont, 4; Anderson, 6
Cedar Waxwing	585	all sections except mountains; most abundant in central N.C.
Loggerhead Shrike	275	all sections; most abundant in central N.C.
Starling	5810	all localities except Yancey-Buncombe; most abundant around major cities—(Wilmington, Raleigh, Greensboro, and Charlotte recorded 600 or more.)
White-eyed Vireo	183	all sections; only 1 in mountains (Ashe Co.)
Yellow-throated Vireo	88	all sections except mountains
Solitary Vireo	36	piedmont and mountains; most abundant in Yancey-Buncombe, 12
Red-eyed Vireo	717	all 20 localities; most abundant in central N.C.
Black-and-white Warbler	117	all sections
Prothonotary Warbler	87	all sections except mountains
Worm-eating Warbler	28	all sections; 11 at Winston-Salem
Blue-winged Warbler	4	Raleigh, 2; Chapel Hill, *; Winston-Salem, 1; Yancey-Buncombe, 1
Orange-crowned Warbler	1	Charleston
Nashville Warbler	3	Winston-Salem, 2; Anderson, 1
Parula Warbler	361	all sections; most abundant at Charleston, 115, and Wilmington, 92
Yellow Warbler	138	all sections
Magnolia Warbler	9	Raleigh, 2; Chapel Hill, 1; Greensboro, 1; Winston-Salem, 3; Piedmont, 1; Anderson, 1
Cape May Warbler	24	piedmont and mountains

<i>Species</i>	<i>Total Individuals</i>	<i>Comments</i>
Black-th. Blue Warbler	117	all sections; more abundant in piedmont and mountains than elsewhere
Myrtle Warbler	486	all sections; most abundant in piedmont
Black-th. Green Warbler	15	Charleston, 1; Chapel Hill, 3; Winston-Salem, 2; Yancey-Buncombe, 7; Transylvania-Jackson-Haywood, 2
Cerulean Warbler	2	Greensboro, 1; Ashe Co., 1
Blackburnian Warbler	19	Chapel Hill, *; Greensboro, 1; Winston-Salem, 1; Stanly Co., *; Anderson, 3; Yancey-Buncombe, 10; Transylvania-Jackson-H'wood, 4
Yellow-throated Warbler	226	all sections; most abundant at Charleston, 112
Chestnut-sided Warbler	134	piedmont and mountains; most abundant in Yancey-Buncombe, 77, and Transylvania-Jackson-Haywood, 38
Bay-breasted Warbler	4	Winston-Salem, 2; Stanly Co., 1; Ashe Co., 1
Blackpoll Warbler	110	all sections; more abundant in piedmont and mountains than elsewhere
Pine Warbler	153	all sections except mountains
Prairie Warbler	267	all sections
Palm Warbler	7	Chapel Hill, 1; Winston-Salem, *; Greenville, *; Anderson, 1; Ashe Co., 5
Ovenbird	233	all sections; most abundant in Yancey-Buncombe, 76
Northern Waterthrush	20	piedmont and mountains
Louisiana Waterthrush	44	piedmont and mountains
Kentucky Warbler	50	Wilmington, 1; Transylvania-Jackson-Haywood, 2; others confined to piedmont
Yellowthroat	456	19 of 20 localities; most abundant central N.C.
Yellow-breasted Chat	220	19 of 20 localities; most abundant central N.C.
Hooded Warbler	160	all sections
Canada Warbler	21	piedmont and mountains; most abundant in Transylvania-Jackson-Haywood, 11
American Redstart	173	all sections; most abundant in central N.C.
House Sparrow	4195	most abundant in count areas including cities; not recorded in Yancey-Buncombe and Transylvania-Jackson-Haywood (both primarily Blue Ridge Pkwy)
Bobolink	1215	all sections except coast
Eastern Meadowlark	1705	19 of 20 localities; most abundant central N.C.
Red-winged Blackbird	4382	19 of 20 localities; most abundant at Wilmington, 1,235
Orchard Oriole	193	19 of 20 localities
Baltimore Oriole	47	piedmont and mountains except Charleston, 1
Rusty Blackbird	18	Wilmington, 1; Chapel Hill, *; Greensboro, 2; Stanly Co., 12; Anderson, 3
Brewer's Blackbird	1	Stanly Co.
Boat-tailed Grackle	335	Morehead, 44; Wilmington, 252; Charleston, 39
Common Grackle	4180	19 of 20 localities; most abundant in piedmont
Brown-headed Cowbird	422	19 of 20 localities; most abundant central N.C.
Scarlet Tanager	86	piedmont and mountains
Summer Tanager	284	all sections; most abundant in central N.C.
Cardinal	2248	19 localities; relatively scarce in mountains
Rose-breasted Grosbeak	33	piedmont and mountains
Blue Grosbeak	224	all sections; relatively scarce in mountains

<i>Species</i>	<i>Total Individuals</i>	<i>Comments</i>
Indigo Bunting	506	19 localities; most abundant at Chapel Hill, 114
Painted Bunting	48	Morehead, 8; Wilmington, 39; Charleston, 1; Eastover, *
Dickcissel	1	Raleigh
Purple Finch	6	Raleigh, 1; Winston-Salem, *; Stanly Co., 4; Greenville, 1; Anderson, *
American Goldfinch	862	piedmont and mountains except Wilmington, 18
Rufous-sided Towhee	1083	all 20 localities; most abundant in piedmont
Savannah Sparrow	161	all sections except mountains
Grasshopper Sparrow	141	piedmont
Sharp-tailed Sparrow	30	Morehead
Seaside Sparrow	143	Morehead, 127; Wilmington, 16
Vesper Sparrow	3	Winston-Salem, *; Stanly Co., 2; Ashe Co., 1
Bachman's Sparrow	12	Wilmington, 1; Charleston, 3; Raleigh, 2; Greensboro, 3; Piedmont, 3
Slate-colored Junco	163	Morehead, 3; Chapel Hill, 1; Winston-Salem, *; Stanly Co., 18; Anderson, *; Yancey-Buncombe, 63; Transylvania-Jackson-Haywood, 78
Chipping Sparrow	639	19 of 20 localities; most abundant central N.C.
Field Sparrow	453	all sections; relatively scarce along coast and in coastal plain
White-crowned Sparrow	5	Chapel Hill, *; Greensboro, 3; Winston-Salem, 1; Anderson, *; Ashe Co., 1
White-throated Sparrow	611	all sections; most abundant in central N.C.
Fox Sparrow	3	Winston-Salem
Swamp Sparrow	53	piedmont except 4 at Wilmington
Song Sparrow	157	all sections; relatively scarce along coast and in coastal plain

EDITOR'S NOTE: The word *piedmont* when capitalized in the above table refers to the count area centered in the vicinity of the town Piedmont, S.C. Otherwise it refers to the geographic region.

General Field Notes

JAMES F. PARNELL, *Department Editor*
Department of Biology, Wilmington College, Wilmington, N. C.

An Early Unrecorded European Widgeon Specimen from North Carolina

DONALD S. HEINTZELMAN

Natural Science Section, William Penn Memorial Museum
Harrisburg, Pennsylvania

10 July 1968

Recently the William Penn Memorial Museum received a collection of birds from Bucknell University, Lewisburg, Pennsylvania. Included were a number of mounted specimens of waterfowl taken many years ago on Knotts Island, Currituck County, N.C.

One specimen in particular is interesting since it appears to be unrecorded in the ornithological literature. It is an adult male European Widgeon (*Mareca penelope*) taken on Knotts Island on 20 February 1909 by G.B. Cason (Figure 1). It is cataloged as number B1553 in the bird collection of the William Penn Memorial Museum.

Prior to 1919, only two records of *M. penelope* were known for North Carolina (Heber, *Auk*, 1902: 76; Pearson, Brimley and Brimley, *Birds of North Carolina*, 1919: 63-64). By 1942, ten specimens and/or sight records of this species were known for the state (Huber, *Auk*, 1927: 95; Pearson, Brimley and Brimley, *Birds*



Fig. 1.—Adult male European Widgeon was taken on 20 February 1909 on Knotts Island, Currituck County, N.C. The specimen pictured above is number B1553 in the William Penn Memorial Museum, Harrisburg, Pennsylvania.

of North Carolina, 1942: 60-62), and by 1959 numerous additional European Widgeons were recorded for North Carolina (Pearson, Brimley and Brimley, revised by Wray and Davis, *Birds of North Carolina*, 1959: 70). Included were several old records which had been overlooked in earlier editions of the State bird book. The specimen in our collection, however, appears to have gone unrecorded and is therefore brought to light to add to the early historical record of the European Widgeon in North Carolina.

Spotted Sandpipers Breeding Near Southern Pines, N.C.

JAY CARTER

P.O. Box 891, Southern Pines, N.C.

19 June 1968

On 3 June 1967, I found a young Spotted Sandpiper (*Actitis macularia*) at Thaggard's Lake, a few miles north of Southern Pines, N.C. The well-feathered but flightless young sandpiper was captured, examined, and released. Two adult Spotted Sandpipers were observed close by. These observations took place on an open point of land that extends into the lake. This point is generally covered with clumps of grasses and weeds with a small mud flat in one area.

On 26 May 1968 I flushed a Spotted Sandpiper from its nest on this same point of land. The nest, which contained four eggs, was located at the base of a small clump of short weeds. It was a shallow depression sparsely lined with dried bits of vegetation. On 1 June the eggs had disappeared from the nest; but judging from the actions of an adult Spotted Sandpiper nearby, all or some of the eggs had hatched successfully. On 18 June a young Spotted Sandpiper, nearly grown and able to fly, was observed on this point.

According to *Birds of North Carolina* (Pearson, Brimley, and Brimley, revised by Wray and Davis, 1959), the Spotted Sandpiper breeds only sparingly in North Carolina. To my knowledge these are the first breeding records for this species in the Southern Pines vicinity.

Wilson's Phalarope at Raleigh, N.C.

ROBERT J. HADER

North Carolina State University, Raleigh, N.C.

1 May 1968

On 30 March 1968 I saw a female Wilson's Phalarope (*Steganopus tricolor*) in Greenview Pond near Raleigh, N.C. It was not quite in full breeding plumage, the characteristic dark neckstripe being well developed but only very faintly shading into cinnamon near the shoulders. It was wading belly-deep in water near the edge of the pond. I approached to within 30 or 40 feet and was able to get an excellent view. Twice it flew off but returned to the same spot within a few minutes. After about 15 minutes it left and did not return.

Birds of North Carolina records 5 or 6 coastal records (1912 and earlier) and one inland record at Highlands (5 May 1896). More recently they were found at Bodie Island in September of 1962 (*Chat*, 27:21) and in September of 1963 (*Chat*, 27:79). One was at Wrightsville Beach in May of 1958 (*Chat*, 22:69). There was also an inland sighting of 10 Wilson's Phalaropes at Fayetteville, N.C., on 16 December 1960 (*Chat*, 25:16).

Prothonotary Warbler Nesting in Anderson County, S.C.

ADAIR M. TEDARDS

207 Brown Road, Anderson, S.C.

6 January 1967

On 23 May 1966 a nest of the Prothonotary Warbler (*Protonotaria citrea*) was found in the Rocky River swamp in Anderson County, S.C. The location of this nest after a three-year search confirmed the suspicion that this species does nest in this area in the very few places that suitable habitat is available. The nest was located about 11.5 feet above the ground in a rotted River Birch stump. The nest, placed in an old woodpecker hole, contained 5 eggs when found. The female flushed from the hole and the male was nearby. Subsequent

trips to the nest site were impossible, and the fate of the nest was undetermined.

South Carolina Bird Life (Sprunt and Chamberlain, 1949) reported the Prothonotary Warbler nesting above the fall line only in Aiken County, while *Georgia Birds* (Burleigh, 1958) states that it breeds in small numbers on the Chattahoochee River and its tributaries in the Atlanta region. In North Carolina there are several records along the fall line (*Birds of North Carolina*, Pearson, Brimley and Brimley, revised Wray and Davis, 1959). A recent record is from Mecklenburg County (*Chat*, 25:70).

Clay-colored Sparrow at Columbia, S.C.

MARCUS B. SIMPSON JR.

P.O. Box 167, Statesville, N.C.

DOUGLAS PRATT

Box 113L, Route 3, Charlotte, N.C.

7 May 1968

On 20 and 21 April 1968 a Clay-colored Sparrow was observed on the campus of the University of South Carolina at Columbia, S.C. The bird was first noted in trees in front of the McKissick Library at 4:30 PM on 20 April, when we were attracted by its unfamiliar and distinctive song. The bird flushed before visual observations could be made, but an immediate reference check to Peterson's *Field Guide to Bird Songs* convinced us that we had found a Clay-colored Sparrow. On 21 April we returned to the campus at 1:30 PM and immediately located the bird by its series of 4 or 5 buzzy, insect-like notes. Recordings of the song were made on a portable tape recorder, and color slides were taken with a camera using a 500 mm telephoto lens. The bird was observed at close range with binoculars by M.L. Hopkins, Mrs. Clyde Sisson, Kershaw Walsh, and Vaud Travis, who is familiar with the bird from his work in Oklahoma. All field marks were clearly visible: the brown cheek patch framed above and below by a dark line; the broad white stripe over each eye; the two lateral, brown crown stripes separated by a median buffy stripe; and the whitish underparts.

This appears to be the second record of the Clay-colored Sparrow for South Carolina. Sprunt and Chamberlain (*South Carolina Bird Life*, 1949) list the bird as an accidental on the basis of a single specimen collected at Middleburg Plantation near Huger in Berkeley County by Dingle on 27 October 1929.

Removal of Harris' Sparrow from the Hypothetical List for South Carolina.

JAY SHULER

43 Kirkwood Lane, Greenville, S.C.

26 January 1967

Publication of the accompanying photograph (Figure 1), clearly a Harris' Sparrow, removes this species from the hypothetical list and establishes it as a species



Fig. 1.—Harris' Sparrow was photographed at Gramlin, S.C., on 20 January 1962 by Jay Shuler. The bird was at the home of Mrs. Edgar Woodfin.

that has occurred in South Carolina. This bird was first observed by Mrs. Edgar Woodfin as reported by Mrs. Carol Davis in *The Chat* (26:22-23). It appeared at the feeding station of Mrs. Edgar Woodfin at Gramlin, S.C., on 6 January 1962, according to information furnished me by Mrs. Woodfin. (In Mrs. Davis' published note the date of its appearance was listed as 5 January 1962.) It was last seen by Mrs. Woodfin on 26 April 1962. On 20 January 1962, I visited Mrs. Woodfin's home and secured a recognizable photograph. In my article "Bird Navigation as Related to Migration," (*Chat*, 20:65-71), I pointed out that most southeastern records for the Harris' Sparrow were published with the indication that the Harris' was in company with White-crowned Sparrows. This was true in this case. The winter population of about 20 White-crowned Sparrows became established, according to Mrs. Woodfin, at her feeder in 1948 or 1949. These numbers were maintained until three years ago when only 9 or 10 White-crowned were present. Last year only five were observed and this year there are only three. A colony of White-crowns in Greenville had a similar history, with the last birds disappearing about 1960. It seems likely that if this decline in the White-crowned population continues, the possibilities of future observations of Harris' Sparrows will be greatly reduced.

BRIEFS FOR THE FILES

Compiled by JAMES F. PARNELL
(all dates 1968)

Common Loon, two birds were seen on several occasions during the summer at Kerr Scott Reservoir near North Wilkesboro, N.C., by Wendell P. Smith.

Red-throated Loon, one was seen at Wrightsville Beach, N.C., on the late date of 28 June, Frances Needham.

Horned Grebe, an adult in breeding plumage was seen at Wrightsville Beach on 13 June by Frances Needham.

Audubon's Shearwater, one was seen inshore over the inlet between Shackleford and Core Banks, N.C., on 10 August by Frank Chapman; and 2 were seen approximately 50 miles off Charleston, S.C., on 25 August by Bruce A. Mack.

Greater Shearwater, one was seen in the Gulf Stream off Cape Hatteras on 26 June by C. Royce Hough.

Cory's Shearwater, approximately 25 were seen off Cape Hatteras on 25 and 26 June by C. Royce Hough; and one was seen about 40 miles off Charleston on 25 August by Bruce A. Mack.

Wilson's Petrel, two were found offshore at Cape Lookout on 2 June, 5 were at Cape Lookout on 6 June, and 11 were at Cape Lookout and Beaufort inlet on 8 June, Frank L. Chapman. Thirty were present off Cape Hatteras on 25 and 26 June, C. Royce Hough; and 12 were found off Charleston on 25 August, Bruce A. Mack.

Brown Pelican, a flock of 17 was seen on 28 June at Wrightsville Beach, Betty Batson.

Magnificent Frigate Bird, an immature bird was found on 27 July near Wadmalaw Island, S.C., by Marvin D. Veronee.

Cattle Egret, a new rookery was located approximately 3 miles south of Springfield in Barnwell County, S.C., by William Post. There were about 120

nests present. An aerial survey of nearby Aiken and Barnwell Counties on 6 June showed 485 Cattle Egrets. A single bird was also found far inland at Elkin, N.C., on 8 June, C. Royce Hough.

Wood Ibis, two pairs were present on 4 April at Magnolia Gardens, Ted Beckett.

White Ibis, about 2,000 pairs were estimated in the rookery at Pumpkinseed Island near Georgetown, S.C., Ted Beckett; and 1,000 pairs in the Battery Island rookery near Southport, N.C., James F. Parnell. Post breeding dispersal records are of a single bird at Southport on 14 August, Frank L. Chapman; 4 immatures south of New Bern, N.C., on 25 June, Mrs. Joel Clark; and 2 at Raleigh, N.C., on several dates between 11 July and 25 August, Robert J. Hader and Robert P. Teulings.

Glossy Ibis, two immature birds were seen on 3 August at Raleigh, Mike Browne.

Yellow-crowned Night Heron, an adult bird was seen at Umstead Park near Raleigh on 11 May by Harry LeGrand.

Shoveler, a drake was late at Elkin, N.C., on 19 May, E.M. Hodel.

Red-breasted Merganser, a female was seen at Wrightsville Beach as late as 1 June by Frances Needham.

Mississippi Kite, one was seen on the eastern edge of Columbia, S.C., on 3 August by Robert Ruiz.

Swallow-tailed Kite, one studied carefully near Atlantic, N.C., on 15 March by Joel Clark Jr.

Sparrow Hawk, one was seen at Pinebluff, N.C., on 7 June, and 2 were there on 24 July, Jay Carter.

Bald Eagle, a young bird was being fed by 2 adults on 8 April near Santee, S.C., Ted Beckett.

Purple Gallinule, 3 pairs present at Magnolia Gardens this spring, Ted Beckett.

Stilt Sandpiper, one was at Chapel Hill, N.C., on 4 July, Robert P. Teulings.

Long-billed Curlew, one was found near Charleston on 4 May by Ted Beckett.

Northern Phalarope, a male and female were seen on 8 June at the Beaufort inlet across from Ft. Macon by Frank L. Chapman.

Great Black-backed Gull, one was found at Wrightsville Beach on 22 July, Frances Needham; and one was at Cape Lookout on 24 August, Robert J. Hader and Frank L. Chapman.

Black Tern, two were found at Anderson, S.C., on the early date of 6 July, Adair Tedards.

Common Tern, two pairs were found nesting at Wrightsville Beach on 4 May for the first local nesting records, Frances Needham.

Ground Dove, one or two seen at Wrightsville Beach on several occasions during the summer, Frances Needham and Dorothy Earle.

Gray Kingbird, one was found at Edisto Beach, S.C., on 5 May by Fred H. May.

Eastern Wood Pewee, an albino was seen being fed by normally colored parents on several occasions in late July and early August near Lewisville, N.C., Fred S. Hill.

Trail's Flycatcher, three pairs were found this year at North Wilkesboro by Wendell Smith.

- Barn Swallow**, found nesting for first time this summer at Edisto Beach, S.C., by Fred May.
- Tree Swallow**, five were early fall migrants at Chapel Hill on 29 June, Robert Teulings. They were early arriving at Elkin this spring on 23 March, E.M. Hodel.
- Red-breasted Nuthatch**, an adult was seen feeding a young bird at Blowing Rock, N.C., on 16 June by Gaston Gage.
- Horned Lark**, young were out of the nest at Raleigh as early as 4 April, Robert J. Hader. Adults were present all summer near Southern Pines, Jay Carter.
- Solitary Vireo**, two were seen on 21 June and 25 July at Southern Pines, Jay Carter.
- Wilson's Warbler**, one was seen near Raleigh on 19 May, Harry LeGrand.
- Brown-headed Cowbird**, juveniles were seen following Rufous-sided Towhees at Raleigh, Robert J. Hader; following Towhees and Field Sparrows at Anderson, Adair Tedards; and following American Redstarts at Southern Pines, Jay Carter.
- Red Crossbill**, five were seen on several occasions between 12 and 25 June at Blowing Rock, Gaston Gage.
- Catbird**, heard giving an excellent imitation of a Whip-poor-will at Blowing Rock by Gaston Gage. Adults present all summer at Wilmington, Polly Mebane.
- Song Sparrow**, an immature bird was banded at Chapel Hill on 18 August for the first local summer record, Robert Teulings. For the past 3 years Song Sparrows have nested in the yard of Albert Maxwell at Morganton, N.C.
- Lark Sparrow**, one seen at Pinebluff, N.C., on 15 May by Jay Carter.
- Slate-colored Junco**, remained at Elkin until 30 May, E.M. Hodel.

BOOK REVIEW

(Continued from page 64)

tables, and diagrams to clarify material under discussion, while a glossary of over 240 words assists those who are unfamiliar with the technical jargon of population genetics. Mayr's bibliography of over 1,980 listings provides the basic source of reference material for any study of evolution, whether for research or personal interest. *Animal Species and Evolution* thus stands as the definitive, classic statement of the synthetic theory of evolution; and every ornithologist concerned with genetics, taxonomy, behavior, population dynamics, and evolutionary biology will find the work indispensable.—MARK SIMPSON JR.



Founded 6 March 1937

Incorporated 8 August 1949

Carolina Bird Club is an incorporated association for the study and conservation of wildlife, particularly birds, chiefly in the Carolinas. Founded in 1937 as the North Carolina Bird Club, it was joined in 1948 by several South Carolina natural history clubs and the name changed to the Carolina Bird Club.

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OUR COVER—Doug Pratt's Rose-breasted Grosbeak drawing is an appropriate reminder of the CBC Fall Meeting, which is featured in "Carolina Birds and Birders." A Yellow-breasted Chat by Doug appears on page 91.

THE SAW-WHET OWL: BREEDING DISTRIBUTION IN NORTH CAROLINA

MARCUS B. SIMPSON JR.

Bent (1938) gave the summer range of the Saw-whet Owl (*Aegolius acadicus*) in part as "south to Maryland (Cumberland); probably rarely northern Pennsylvania (Titusville); Ohio (probably Cleveland and Columbus); northern Indiana. . . ." In West Virginia, however, Brooks (1933) had previously reported the capture of an immature on 22 June 1932 in Preston County, while Wetmore (1937) had stated that the southernmost record of the owl was based on an immature collected on 12 June 1936 at Cranberry Glades, Pocahontas County, West Virginia.

Pearson, Brimley, and Brimley (1942) regarded the Saw-whet Owl as a "casual winter visitor" on the basis of eight records from North Carolina. During the past three decades, however, a growing body of evidence has been presented to document the occurrence of the Saw-whet Owl during the breeding season in the Appalachian Mountains of western North Carolina and eastern Tennessee. The majority of these records, coming in spring and early summer, are confined to the higher altitudes, almost exclusively in the forests of Fraser fir (*Abies fraseri*) and red spruce (*Picea rubens*) (Figure 1).

During the spring of 1968, I conducted Saw-whet Owl censuses in a number of ranges, including the Great Balsam Mountains, Pisgah Ridge, Plott Balsam Mountains, Roan Mountain, and the Blue Ridge Mountains. Using the Blue Ridge Parkway and similar roads, I stopped every .2 mile and attempted to elicit responses from the owl by whistling an imitation of the bird's cooing notes. Unfortunately, it is almost impossible to hear the calling of the Saw-whet when there is any wind movement; and many nights produced no results. My observations are listed below along with other pertinent records of the Saw-whet Owl from the six major North Carolina mountain ranges which contain stands of Canadian zone forests (Figure 1).

GREAT SMOKY MOUNTAINS

Although the first evidence of the Saw-whet Owl's presence in North Carolina during the breeding season came from the Great Smoky Mountains National Park, the exact date of the initial discovery remains uncertain. The first published data came when Stupka (1946) reported a total of eight summer records of the bird from 1941 to 1945. The earliest of these discoveries was on 21 June 1941, when Norman P. Hill and Richard Bowen heard the notes of a single bird at Clingman's Dome. Hill and Bowen were students at Harvard University, and both were quite familiar with the bird from direct experience in the New England area. After their discovery, Stupka was eager to learn the exact status of the Saw-whet in the Park; and his subsequent field work revealed the owl on a number of occasions. On 11 August 1943 he observed what appeared to be a Saw-whet Owl near the summit of Mt. LeConte (6,500 feet). Then on 26 May 1944 Stupka and Peter Koch heard one at Clingman's Dome (6,300 feet) at 9:00 PM and a second individual at Newfound Gap (5,040 feet) at 10:00 PM; while on 28 May 1944 they found Saw-whet Owls calling at Newfound Gap and Indian Gap (5,266 feet). On 9 April 1945 Mr. and Mrs. Stupka heard a single bird at Newfound Gap at 9:30 PM; and on 6 May 1945 Stupka and Alfred Lewy returned to the same site and found one owl calling there.

Stupka's reports prompted Ganier (1946) to publish several earlier observations of Saw-whet Owls at the lodge near the summit of Mt. LeConte. On 20 June 1933 Ganier and George R. Mayfield spotted a Saw-whet Owl and attempted unsuccessfully to collect the bird to confirm their identification. Ganier later

discovered that Paul J. Adams had seen small owls on several occasions while he was keeper of the old lodge; and Adams (personal communication) informs me that in light of his later experiences with the bird, he is now certain of these records. Furthermore, he reports that his earliest recollections of these owls date back to around 1925, when he made his first trips to the top of LeConte. Since Ganier and Adams were the first ornithologists to conduct field work in the spruce-fir forests of the Smokies, it is doubtful that any earlier records of the Saw-whet Owl will come to light from this area.

Stupka (1963) recently summarized the records from the intervening years; and he states that of seventeen observations, all from high altitude spruce-fir forests, nine were in April, seven from May, and one from June. Stupka evaluated these records by defining the Saw-whet Owl as "an uncommon permanent resident in the spruce-fir forests of Great Smoky Mountains National Park."

Savage (1965) published a number of additional records from the Smokies, several of which were from localities where the bird had not been previously noted. Savage reported a total of eight calling stations along a transect from Ice Water Springs (5,600 feet) to Clingman's Dome with a side spur down to Walker Prong (4,600 feet), while the best area for the owl was between Indian Gap and the Spruce-Fir Nature Trail along the road to Clingman's Dome. The birds were seen and heard frequently in this locale each year; and Savage suspected that a pair nested, although his extensive searches never revealed any evidence of breeding. Savage (personal communication) confirmed Stupka's statements regarding the singing season of the owl, for he reported that the peak of singing is in April and May with very little calling after the end of June.

Following the publication of Savage's findings, a number of Tennessee ornithologists, particularly James M. Campbell, conducted extensive field work for several years, primarily in May, in search for a nest. Although no nests or young were seen, Campbell (personal communication) found that the Saw-whet Owl was a regular resident in the spruce-fir forests along the road from Newfound Gap to Clingman's Dome.

In addition, James E. Davidson (personal communication) noted two Saw-whet Owls calling at Collin's Gap (5,720 feet) on 6 April 1968 from 8:30 to 10:00 PM; and he observed one of the birds with a spotlight. Dr. and Mrs. William Cobey (personal communication) reported three of these owls calling on the night of 27 April 1968 along the road from Newfound Gap to Clingman's Dome. One of the birds was at Collin's Gap, another was at Indian Gap, and the third was near Clingman's Dome.

BLACK MOUNTAINS

The first published records outside of the Great Smokies came when Thomas W. Simpson (1957) reported a Saw-whet Owl on 6 and 7 June 1957 near the summit of Mt. Mitchell (6,400 feet). Several years later David A. Adams (1959) observed one of these owls in a Fraser fir on the night of 18 May 1959; and he heard owls calling there on 4 and 16 June of the same year. Furthermore, Adams stated that the Park personnel had informed him that the Saw-whet Owl was heard almost every spring in the Mt. Mitchell vicinity.

The Superintendent of Mt. Mitchell State Park, John R. Wilson (personal communication), informs me that the owl was first discovered during the spring of 1949, when he observed it on several occasions. Following this discovery, the Saw-whet Owl has been noted almost every year; and individuals have been captured and photographed. Although the birds are present from April through August, no nests or young have been reported.

GREAT BALSAM MOUNTAINS

Beginning in the Great Smokies at Tri-Corner Knob, the Great Balsams run in a south-southeast direction for over 45 miles to their terminus at Tanasee Bald,

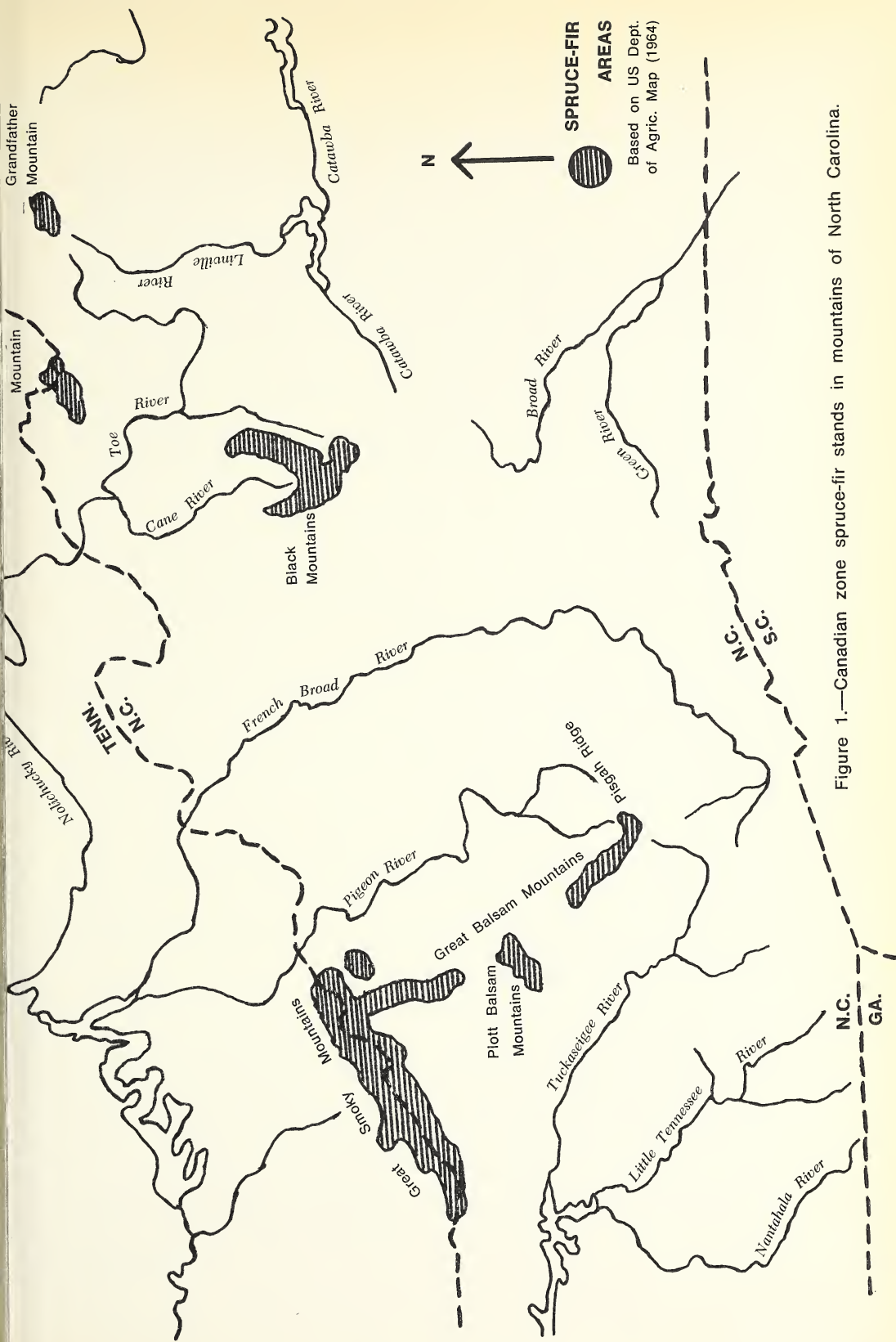


Figure 1.—Canadian zone spruce-fir stands in mountains of North Carolina.

where the Canadian zone spruce-fir forests reach their most southern extension in the eastern United States.

On 10 April 1965 Peake (1965) heard a Saw-whet Owl calling at 3,800 feet near Tennessee Creek in the Balsam Mountains, and his observation proved to be the first record from this massive transverse range. Subsequently Peake discovered a single bird calling from the Haywood County side of Richland Balsam (6,400 feet) on 3 May 1965; and on 10 July of the same year he observed an immature Saw-whet Owl on the trail to the peak of Richland. This was the first evidence for the breeding of the bird south of Cranberry Glades, W. Va.; and to date no additional evidence, either immatures or nests, has been reported in North Carolina. Peake (personal communication) states that these owls are frequently observed on Richland Balsam from April until mid-August, although the series of long cooing notes are rarely heard after June.

During the spring of 1968, I located calling stations at the following sites in the Great Balsam range.

Tanasee Bald (5,300 feet)—11 April 1968, 9:15 PM: one owl cooing.

Herrin Knob (5,700 feet)—11 April 1968, 9:30 PM: I recorded on tape the cooing notes of one owl.

Parker Knob (5,400 feet)—11 April 1968, 10:00 PM: one owl cooing.

Haywood Gap (5,200 feet)—11 April 1968, 10:20 PM: one owl cooing.

Beartrail Ridge (5,860 feet)—11 April 1968, 11:00 PM: one owl cooing.

Richland Balsam (6,200 feet)

12 April 1968, 8:00 PM: one owl cooing on Haywood County slope.

12 April 1968, 8:45 PM: one owl cooing on Jackson County slope.

Reinhart Knob (6,000 feet)—10 May 1968, 11:00-11:50 PM: one owl cooing.

PISGAH RIDGE

Fires and logging have destroyed over 25,000 acres of Canadian zone forests in this range, but there are still remnants of the spruce-fir belt beginning at Beech Gap and running for about 2 miles to the east.

Silvermine Bald (6,100 feet)—11 April 1968, 8:30-8:50 PM: The first evidence of the Saw-whet Owl in this range came when I listened for some 20 minutes to a bird cooing near the peak.

Devil's Courthouse (5,700 feet)—12 April 1968, 10:15-11:00 PM: one owl cooing.

PLOTT BALSAM MOUNTAINS

This lofty range intersects the Great Balsam Mountains at right angles, and there are sizable areas of spruce-fir forests throughout the higher elevations.

Waterrock Knob (5,800 feet)

12 April 1968, 9:10 PM: The first evidence of the Saw-whet Owl in this range came when a single bird responded to my whistle and began calling down the west slope below the Parkway.

10 May 1968, 9:30 PM: one owl calling.

ROAN MOUNTAIN

Roan High Bluff (6,000 feet)—13 April 1968, 8:20-9:30 PM: The first evidence of the Saw-whet Owl in this range came when I listened for over an hour to the cooing notes of a single bird. Unfavorable wind conditions prevented a thorough survey of the mountain; and although I thought that a second owl was calling, I was never able to confirm its presence. High winds also prevented any field work on a number of subsequent nights during the spring.

BLUE RIDGE MOUNTAINS

Grandfather Mountain (5,900 feet)

Although regions of spruce-fir are rare in the Blue Ridge, there are around 600 acres of this Canadian zone forest on Grandfather. I have visited this peak

on a number of nights, but the wind has always prevented any field work for owls. I strongly suspect that the Saw-whet is actually present, although the winds are so constant and severe that the bird is not likely to be heard unless the observer is within close range.

OTHER RANGES

Small stands of Canadian zone forest, ranging in size from a few trees to 30 or 40 acres, are found in scattered high altitude regions throughout the southern Appalachians. Such ranges as the Nantahalas, Great Craggies, Shining Rock, and the Blue Ridge provide excellent opportunities for determining the minimum ecological requirements of the bird. Considering that almost no field work has been done in these areas, it is not surprising that Saw-whet Owls have never been reported there.

Outside of the high altitude spruce-fir forests, Hall (1966) reported that Janice N. Bolte heard a Saw-whet Owl calling regularly from 24 July to 5 August 1966 near Murphy, Cherokee County. Since the record is far removed from Canadian zone woodlands, its significance is uncertain, for it may represent an early post-breeding wanderer from the higher altitudes.

DISCUSSION

In North Carolina the Saw-whet Owl should be considered a rare winter resident throughout the state and an uncommon summer resident in the high altitude spruce-fir forests of the mountain region. During the months of April through August, Saw-whet Owls have been found in the Great Smoky Mountains, Great Balsam Mountains, Plott Balsam Mountains, Roan Mountain, Pisgah Ledge, and the Black Mountains.

According to Sprunt and Chamberlain (1948) the Saw-whet Owl has never been recorded in South Carolina before November, but records in the *Chat and Birds of North Carolina* (1959 edition) indicate its presence in the North Carolina piedmont as early as September. Furthermore, it is significant that 25% of the North Carolina "winter" records come from September and October, prior to the arrival of the bird in South Carolina. At present we cannot determine whether this early influx represents movement of a portion of the summer resident population, although three of the five records from this period are from the mountains and western piedmont. Systematic banding of the summer resident population is needed to clarify this problem.

Although a number of ornithologists contend that the Saw-whet Owl is strictly limited to the spruce-fir forests, the exact distribution of the breeding population is still subject to uncertainty. Clearly the bird is most abundant in the Canadian zone woodlands, but additional field work is required to determine whether the bird inhabits hemlock groves and other coniferous associations.

Several authors have suggested that the Saw-whet Owl has expanded its range in the North Carolina mountains in recent decades. However, the evidence to support this view is highly circumstantial. Ganiel and P.J. Adams discovered the owl in the Smokies during their initial explorations there, while the bird was found in most of the other ranges within a few years after roads made them accessible. However, it is interesting that Cairns (1891, 1894) and Burleigh (1941) never found the Saw-whet in the Black Mountains. Burleigh studied the area for 5 years, while Cairns explored these mountains for some 15 years. Every spring Cairns spent from 2 to 6 weeks camping and collecting birds in the Great Craggy and Black Mountains. Considering the extent of these studies, it is surprising that the owl was never reported until 1949. In other areas, however, the recent increase in records reflects three trends: 1) the growing popular interest in birds, 2) the increased accessibility of the high mountain country due to new roads, and 3) ornithologists intentionally searching for the owl following reports of its discovery.

If the Saw-whet Owl has been present in these spruce-fir forests since the coming of man, its range has actually been severely reduced. Korstian (1937) reported that over 90% of the original Canadian zone forests of the southern Appalachians had been destroyed by fires and logging, leaving less than 100,000 acres out of an original 1 million. During the past decade the balsam wooly aphid (*Chermes piceae*) has devastated the Fraser fir in North Carolina. Amman and Speers (1965) reported that severe infections of this pest were present on Roan Mountain, Grandfather Mountain, and the Great Smoky Mountains, while over 1,750,000 trees had been killed in the Black Mountains. Despite intense research efforts for biological and chemical controls, no practical measures have been discovered to halt the spread of this insect; and the future of these magnificent forests is uncertain.

Savage (1965) and Peake (1965) have proposed that the Saw-whet Owl undergoes a vertical migration in the southern Appalachians. The population increases noticeably in the mountain valleys in late February and March; and the owls then move up the slopes, arriving on the breeding grounds by the second week of April. Observations of the birds in the valleys during February and March have been made by Stupka (1963), Peake (1965), and the present author; while there are practically no records from the high altitudes before early April. I spent the nights of 27 and 28 March 1968 in the Great Balsam and Great Smoky Mountains; and despite the ideal wind conditions and some 12 hours of whistling and listening, no owls were found in either range. The exodus from the spruce-fir forests probably begins by early September, for there are no records of the owl from these areas after mid-August. Additional field work is needed to determine whether any of the birds linger in the higher altitudes throughout the winter.

Despite several years of systematic and intense field work by various capable observers, nests of the Saw-whet Owl have never been found in North Carolina. The only evidence of its breeding rests on Peake's sight record of an immature on Richland Balsam.

SUMMARY

The Saw-whet Owl is an uncommon summer resident throughout the spruce-fir forests of the North Carolina mountains. Although range expansion is unlikely, there is evidence to support vertical migration and nesting.

ACKNOWLEDGMENTS

I am indebted to Albert Ganier, Richard Peake, Tom Savage, and Arthur Stupka for their comments and suggestions in the preparation of this paper.

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16 September 1968

BOOK REVIEWS

Common Bird Songs

Donald J. Borror. 12-inch 33 1/3 RPM recording with 28-page booklet. Dover Publications, Inc., New York. \$2.50.

Field Book of Wild Birds & Their Music

F. Schuyler Matthews. 1921. Reprinted by Dover Publications, New York, 1967. 325 p. illus. musical key. glossary. index. paperbound. \$2.75.

The recording *Common Bird Songs* and its companion booklet constitute the best introduction to field identification of birds by song that I have yet found. Only 60 common species are covered, but several examples are given for most of them to indicate variations. Easily recognized species such as the Bobwhite have only one example, while the Carolina Wren has nine and the Rufous-sided Towhee eight. Species are grouped by similarity of songs rather than being placed in taxonomic order, a decided improvement over some otherwise outstanding recordings. Distortion mars a few songs, but I do not think this will present a problem on average home and school play-back equipment. The modest price makes it easy to overlook minor flaws in recordings made under field conditions. The booklet is thoughtfully written and attractively illustrated. The basic bird songs and call notes should be learned rapidly under Professor Borror's guidance.

Matthews' *Field Books of Wild Birds & Their Music* no doubt was a major contribution to bird study in its day, but I doubt that many modern birders will have the patience to study his book when adequate recordings are available. However, experienced birders might find it enjoyable reading, not for learning the songs but because of his interesting comments on them. For instance, Matthews compares the song of the Field Sparrow to one of the "Psalms of David chanted by the church choir."—EFP

(Continued on page 107)

BIRD MIGRATION THROUGH AN ABANDONED FARMSTEAD

PAUL A. STEWART

On the weekend of 20 and 21 April 1968, I spent most of the daylight time at an abandoned farmstead observing the singing and territorial behavior of a male Cardinal (*Richmondia cardinalis*). The farmstead was surrounded by a small clearing, and a pine woodland extended about $\frac{1}{2}$ mile southward from the clearing. The southeastward flowing Tar River was about $\frac{1}{4}$ mile northeastward from the farmstead. At the farmstead was a large honeylocust (*Gleditsia triacanthos*) tree of which part of the top was dead and part was covered with foliage. The foliage was retarded as compared with other nearby trees of comparable size. It soon became apparent that I was located in a place affording special opportunities for observing the northward migration of birds. Birds were seen to come to the treetop from a much greater height and were thus assumed to have stopped at the farmstead in the course of a migratory flight.

My attention was first attracted to this situation at 5:45 AM (EST) on 20 April when I noted a male Baltimore Oriole (*Icterus galbula*) perched quietly on the topmost branch of the honeylocust tree. After a pause of less than 5 minutes, the oriole continued northward over the open field without having stopped to feed. Then at 6:05 AM eight Myrtle Warblers (*Dendroica coronata*) appeared above the treetops and flew directly into the branches of the honeylocust tree. After a quiet pause of less than a half minute the warblers actively moved about the treetop, presumably foraging for food. These warblers continued foraging for only about 8 minutes, and then they left the tree and flew northward over the open field.

At 6:35 AM (EST) of the morning of 21 April, six Chipping Sparrows (*Spizella passerina*) appeared above the treetops and flew down to the uppermost branches of the honeylocust tree. They remained in the treetop only about a minute and then, in close succession, they flew to the ground to feed where a Song Sparrow (*Melospiza melodia*) was feeding close beside me. They continued feeding only about 8 minutes and then flew away to the northward.

Many of the migrating birds that came to the farmstead came via the honeylocust tree, but there were some coming via other routes. A Blue Grosbeak (*Guiraca caerulea*), a Palm Warbler (*Dendroica palmarum*), and an Eastern Kingbird (*Tyrannus tyrannus*) approached from levels below the treetops and foraged briefly at the farmstead. The kingbird flew northward after spending less than 3 minutes at the farmstead. The Blue Grosbeak and the Palm Warbler spent 10 to 15 minutes at the farmstead before their unobserved departures. It seemed evident that these birds, too, were a part of the transient throng.

A few birds were observed to continue their migrations without stopping at the farmstead. Four unidentified warblers and two groups of Blue Jays (*Cyanocitta cristata*) flew northward without stopping at the farmstead. Although Blue Jays called in the nearby woodland, the groups of 8 and 14 flew quietly overhead and continued northward until I could no longer see them with the aid of binoculars.

While it could not be known how far the Myrtle Warblers and Chipping Sparrows had flown before coming to the farmstead, it seemed likely that they were in the course of a migratory flight. These birds sought only food immediately after their arrival at the farmstead, but no free water was available except at the river about $\frac{1}{4}$ mile northward.

In addition to the birds assumed to be transients, there were two Chipping Sparrows and two Yellowthroats (*Geothlypis trichas*) observed at the farmstead.

(Continued on page 107)



Bird Watchers' Roundtable

H. DOUGLAS PRATT

MARCUS B. SIMPSON JR.

Our guest columnist for this edition of the Roundtable is Gaston Gage, a long-time member of CBC and a very capable birder. Mr. Gage has spent his summers in the Blowing Rock area for the past several years, and it is this area about which he writes for us here. His comments are of year-round significance, but special emphasis is given to the spring season. The editors hope that this will enable many of you to make plans to implement some of Mr. Gage's suggestions this following spring.—HDP

Bird Finding in the Blowing Rock Area

GASTON GAGE

Birds are where you find them. You may find none where there should be some, or you may find some where they should not be.

In many cases in the Blowing Rock area of North Carolina you will have to be satisfied with identifying by sound rather than sight. You will hear many birds that you can never see. Polish up on your bird songs, especially the ones mentioned here.

At Blowing Rock you will find nesting birds that you do not find nesting down country. Among these are Scarlet Tanager, Rose-breasted Grosbeak, Solitary Vireo, Red-breasted Nuthatch, Slate-colored Junco, Horned Lark, Veery, Canada Warbler, Black-throated Blue Warbler, Chestnut-sided Warbler, American Goldfinch, Ruffed Grouse, and Common Raven.

There are some birds you will find almost everywhere such as the Catbird, Rufous-sided Towhee, and Tufted Titmouse. There will be no particular mention made of these.

There are some birds common down country that you should not see at Blowing Rock. This list includes the Mockingbird, Red-bellied Woodpecker, Red-headed Woodpecker, Blue Grosbeak, White-eyed Vireo, Brown-headed Nuthatch, Chuck-will's-widow, and Summer Tanager. If you see any of these, you have made a find. Twenty-odd years ago, Cardinals first appeared at Blowing Rock. Now they are fairly common. Two pairs were in our yard all summer.

Bird Walks: Here are several nice walks with easy grades. There is no automobile traffic, the scenery is beautiful, and there should be birds.

1. Go to the entrance to the Cone Estate about 1 mile out the Linville Road (US 221). Park your car and walk about 100 yards and turn left. Follow this road as far as you wish but you will have to back-track to your car.

In the mornings and late afternoons during June and July you will hear a chorus of bird songs. The Veery and Wood Thrush will predominate. You may hear a Rose-breasted Grosbeak or Scarlet Tanager. Do not let a Robin fool you. You should hear some warblers, probably Black-throated Blues and Chestnut-sideds. It will take patience to see any of them.

2. Go out the Linville Road (US 221) about 2 miles and turn in at the Blue Ridge Parkway. Instead of going on the Parkway, take the road that goes under it. Follow the signs to the Trout Lake. At the parking area, leave your car and follow the signs to the lake. It is about a mile around the lake. You will come out on the road you drove in on, so follow it to the parking lot.

On this walk you will hear about the same birds as you heard on the preceding walk with the Canada Warbler and Parula Warbler added. The Canada Warbler is usually easy to see as it will come to squeaking. You should hear the Solitary Vireo. His note is much like the Red-eyed Vireo but with a little more variety in it. There should be a Belted Kingfisher at the lake. An added bonus on this walk is a good look at some of the finest hemlock trees in this part of the country. They are giants.

3. Go out the Linville Road (US 221) to the Blue Ridge Parkway and follow it to the right until you come to the Craft Center. Park at the far end of the parking lot. Walk to the Parkway and you will see a gravel road going under the parkway. This road goes to the top of Flat Top Mountain. You may go all the way to the top—about 5 miles up and back—or go up to the meadow where the Cone graves are, about 3 miles up and back. You will probably hear a fine Veery chorus on this walk, especially fairly early or fairly late in the day. It is probable that you will hear Scarlet Tanagers and Rose-breasted Grosbeaks. When in the open, at the graves or on top, look out for hawks or a possible raven. As you walk through the woods you may walk up a Ruffed Grouse. In June, the flame azalea you see on this walk is worth the trip.

Enough of formal walks. Now it is a matter of luck and chance. Listen for the croak of the raven. You almost always hear ravens before you see them. They may be soaring very high or passing over down low. You generally see one or two from Grandfather Mountain.

Any time you are near a big pasture with short grass be on the lookout for Horned Larks. You may see one sitting on a fence post. Riding or walking, look out for the Ruffed Grouse. Sometimes you see them on the side of the road. Be on the lookout where you find ripe fruit, especially wild strawberries.

Periodically there is a heavy crop of white pine cones. When these occur look for Red Crossbills. You spot them by their call note, a sort of chirp. They are most apt to be in the top of high white pines, occasionally in the hemlocks. I have never seen them here except in the white pine cone years.

The fall hawk migration seems to be entirely a matter of luck. Mine has been bad. Thunder Hill, a lookout about a mile or two north of Blowing Rock on the Parkway is a favorite watching spot. Any high place should do. Any time during the last half of September seems to be the time.

The fall migration of warblers starts in August. Listen for them. They generally travel in flocks. Listen for the titmouse or chickadee. Warblers often travel with them. I have seen them more in bad weather than in good. Be prepared to be confused.

(Continued on page 107)

CONSERVATION

AND THE CAROLINAS

MARIE B. MELLINGER, *Department Editor*

Conflicts in Conservation

We have borrowed the title for this column from an article by Herman C. Kranze in *Bioscience* (September 1968), in which he says "finding livable solutions to conflicting conservation issues will put our society to one of its most severe tests. We shall have to draw heavily on the enlightened leadership of the brave new college generation to see us through the battles of environmental pollution, food and population, and other critical problems. A conservation-wise citizenship will help insure intelligent solutions through peaceful democratic processes. Let us rise to the challenge."

The phrase "conservation-wise citizenry" is all important. We are too prone to let a few leaders do our work for us and sit back on the sidelines with a sort of smug complacency. Conservation should be a major concern to every birder, botanist, and nature lover.

The conflicts arise when different approaches to conservation are in opposition to each other. Such as hunters wishing to keep a natural area for a hunting preserve, and nature lovers wishing to keep it an area with no hunting allowed. We must let our voices be heard. Hazel C. Green, in a recent issue of the *Purple Martin News*, states that the 11 million bird watchers in the United States could be a formidable force for conservation, *if they would*.

In the same recent issue of the *Purple Martin News*, Dr. Frances Hamerstrom expressed one of the conflicts in conservation, when she wrote, "Beauty is not subject to question, beautification is. Beautification immediately implies man-made standards and men are not equally perceptive. . . . A marsh, a bog, a prairie which has not been developed, is to the ecologically uneducated less sightly than something created by man. There are those who do not have the eyes to see natural beauty because money was not spent. There is no justification for substituting man-made beautification for beauty which is naturally present."

James C. Wallace, Associate Professor of Social Science at North Carolina State University, writing on "our priceless heritage of natural resources" in *North Carolina Architect*, carries this idea further by stating, "Things without price have no value at all and thus fall prey to things which have price tags on them. And what a paradox it is that in order to save the 'priceless' we must first put a price on it, and soon, if it is to be done at all."

Leslie A. Reid, in *Bioscience*, wrote, "Some personages argue that conservation and preservation are nearly synonymous, others believe conservation is the wise use or management of resources for human benefit."

* * * * *

On 13 October about 50 people turned up for a clean-up project held by the Georgia Conservancy, the Georgia Appalachian Trail Club, and the Georgia Group of the Sierra Club, and filled 62 big bags of litter in the Tray Mountain-Cheese Factory Area. This was an experiment in "doing, not talking," and we hope other groups will undertake this type of clean-up project in other scenic areas.

* * * * *

There was a large attendance at the public hearings on the phosphate-mining issue, at both Atlanta and Savannah, and public opinion was definitely against the leasing of any off-shore lands in Georgia. Conservation-minded organizations

including the Georgia Ornithological Society were represented at one or both of these hearings. Timely reading is the article on "Salt Marshes and Estuaries" by A.W. Cooper in the June-July 1968 issue of *North Carolina Architect*.

* * * * *

The *Conservation Foundation Newsletter* calls attention to the signing of the controversial Federal-Aid Highway Act by President Johnson. The President did call it a "setback to the cause of conservation," and asked Congress to correct its more "ill-considered sections." But Congress has made no move to do this, and the bill opens the way for roads to cross scenic or historic areas, or parks or refuges.

Apropos of highways, about 80 persons, in cold and windy weather, attended a Georgia Conservancy sponsored meeting at DeSoto Falls to hear various public officials discuss planning on the extension of the Blue Ridge Parkway, and the new Appalachian Highway. Dr. E. Seiferle of the Georgia Appalachian Trail Club presided over this meeting, and talks were given by Granville B. Lilies, Superintendent of the Blue Ridge Parkway; Leland S. Veal, Planning Engineer for the Georgia Department of Highways; and Donald Hughes and Russel Griffith of the National Forest staff. Present plans seem to be for the continuation of the Parkway from its present western terminal, into Georgia near Dillard, and eventually down to Kennesaw Mountain. There is also long range planning for a north and south Appalachian Highway to link present expressways in Georgia with the new perimeter highway on the west side of the Great Smoky Mountains National Park. All officials emphasized that no definite locations had been established and that all care would be taken that planned highways would not pass through historic sites or scenic areas unless every other alternative was exhausted. Dr. Seiferle concluded the meeting by saying, "With the amount of money available they will have to proceed slowly."

New, Timely, and Inexpensive Reading Matter

Our Plundered Planet, Fairfield Osborn, new paperback edition, Pyramid Books, New York, 75¢

Free from the Conservation Foundation, 1250 Connecticut Avenue, Washington, D.C. 20036 (single copies):

The Unity of Ecology, Fraser Darling

Wildlife Resources in a Changing World

2nd Annual Report of the President's Citizens Advisory Committee on Recreation and Natural Beauty, available from the committee, 1700 Pennsylvania Ave., N.W., Washington, D.C. 20006

From the Government Printing Office, Superintendent of Documents, Washington, D.C. 20402:

Survival or Surrender of Endangered Wildlife—catalog no. I 49.4-123-15¢

A Primer on Water—catalog no. 119.2 W 29/3-35¢

A Primer on Ground Water—catalog no. 119.20 W 29/6-25¢

A Primer on Water Quality—catalog no. 119.2 W 29/9-30¢

CAROLINA BIRDS *and* BIRDERS



WILLIE M. MORRISON, *Department Editor*

CBC Fall Meeting at Blowing Rock, N.C.

Some of the genuine joys and delights of covering for *Chat* the Fall Meeting of the Carolina Bird Club, held 27-29 September 1968 in the Green Park Hotel at Blowing Rock, N.C., are the opportunities to see old friends, meet new bird lovers, and get to know many of the members of the Lenoir Audubon Club, our host club for this event.

Under the leadership of their capable president, Miss Helen S. Myers, and vice-president, Miss George Wilcox, every part of the program for the weekend was carefully organized to give the most pleasure to visiting CBC members. Words of praise and thanks go to C. Garvin Hughes, former CBC vice-president, and Mrs. Hughes, members of the host club from Hickory, N.C., and to our new vice-president, E.M. Manchester and his wife from Lenoir, N.C. Clara Manchester, having a "green thumb," supplied most of the flower arrangements used in the lobby and the hotel Convention Room. The conversation piece was her bowl of orange-red Montezuma roses on the registration table.

On our program covers was a drawing of a Broad-winged Hawk, soaring over the mountains and valleys, drawn on the lower part of the program. Contributed by Lenoir artist Mary May, the hawk is reproduced in our department heading. Mrs. May also donated, as one of the door prizes on Saturday evening, a painting of Royal Terns on the beach. To add to our anticipation, numbers were given to all who registered, for the drawing of door prizes both evenings. Such Prizes! Three beautiful chairs made in Lenoir, a table, bird house, a dozen books, bags of sunflower seeds, and other gifts donated by the merchants of Lenoir and Blowing Rock.

At the Friday evening meeting Bob Teulings, our enthusiastic and capable president, welcomed the members and introduced Miss Myers, who welcomed the visitors and thanked all her co-workers for making this meeting so successful.

Ed Manchester introduced Jim Crouch, District Ranger for Grandfather Ranger District, who in turn introduced the speaker for the evening meeting. Tom Smith, Deputy Forest Supervisor, gave an illustrated lecture on "Rehabitation of

the Kirtland's Warbler." The U.S. Forest Service, the Michigan Department of Conservation, and the Michigan Audubon Society, all working together, have been able to save from extinction one species of bird, probably a thousand individuals, comprising the world's entire population.

Our field trips Saturday were a highlight of the weekend. These were led by Garvin Hughes and Mrs. Hughes, Mrs. Ellison Smythe, Mr. and Mrs. Fred May, Jay Shuler, and Helen Myers, all experienced in knowing where the birds might be found. Each trip was repeated in the afternoon.

We were all eager to see the Broad-winged Hawks on their fall migration during the Saturday field trips, and we looked forward to the Saturday evening meeting. The speaker was Ferd W. Behrend, of Elizabethton, Tenn., member of the Tennessee Ornithological Society, who gave an illustrated talk. Mr. Behrend related the history of his observations since 1943 of fall hawk migrations and his discovery of the Snow Bunting in 1954 on Roan Mountain. He told us many of his experiences, sometimes with temperatures below zero, observing and hunting rare species in five states around North Carolina and Tennessee.

Eighty-seven species of birds were reported sighted at the Blowing Rock meeting. It started out Friday afternoon to be a "hawk" weekend with everyone anticipating the Saturday field trips to Thunder Hill to see the migrations of the Broad-winged Hawks. As it turned out, we saw only scattered groups of three to five. The total was 15, plus a Common Raven that had staked out Thunder Hill as his territory during the summer. His hoarse "crauk" and "cr-r-r-cruk" let us know that we were the intruders. One other party saw five hawks soaring and gliding in and out of a cloud bank further up the mountain.

Late Friday afternoon, Mrs. Ellison Smythe, who has spent most of her summers in Blowing Rock, came by the hotel to plan her field trips for the next day. The word quickly spread as she told us to go beyond the parking lot and back of the hotel late in the afternoon and early in the morning to watch the Red Crossbills feeding on the cones of the white pines, spruce, and hemlocks. These are small birds, about the size of a House Sparrow. It was hard to see either color or bills silhouetted against the sky in the top of the evergreens. Sunday morning Mrs. Mary Elizabeth Ragsdale, Jamestown, N.C., and I were the last ones to leave the parking lot. Standing under a tree, we watched these little birds start coming down out of the trees, onto the wires and dropping to the ground to feed. There were females with dusky streaks on grayish olive with a yellowish rump and breast, immatures, many of them showing varying degrees of brick red color among the streaks. Six of the approximately 25 were males still in full plumage. We had a good opportunity to study their large crossed bills.

The third most talked of species was the Rose-breasted Grosbeak. The male is a handsome bird of black and white with rose-red breast. Many of the observers learned the female for the first time. She is a streaked brown on buff bird with wide white eye stripes and dark cheek patches. They were seen as scattered individuals feeding in the evergreens around the hotel. Saturday afternoon Miss Myers' group picked up a flock of 15 or more on the Flannery Fork Road. They preceded us up the mountain for a mile or two, giving us a chance to study the variations in color of the males.

The Tennessee Warbler seemed to be the most abundant of the migrants. Even the knowledgeable gave up trying to identify the warblers in fall plumage. Others were easily recognized, such as the Nashville, Black-throated Blue, and Black-throated Green, Chestnut-sided and Bay-breasted, Blackpolls and Black-and-whites, Cape May and Magnolias, American Redstarts and Parulas.

Several species of vireos were spotted as were the Ruby-crowned Kinglets, Cedar Waxwings, and Slate-colored Juncos along with Red- and White-breasted Nuthatches, Brown Creepers, and Winter Wrens. American Goldfinches were



Above left: Presiding at the registration desk for the CBC Fall Meeting at Blowing Rock, N.C., are Miss Anne Wilcox; Miss Helen S. Myers, president of the Lenoir host club; and Miss George Wilcox, vice-president of host club. In foreground are Clara Manchester's Montezuma roses.

Above right: CBC President Bob Teulings congratulates guest speaker Tom Smith, deputy forest supervisor. Looking on at right is District Ranger Jim Crouch, of Grandfather Ranger District.

Below left: After a busy day in the field CBC members still have plenty of energy for conversation. From left are Mrs. Charlotte Hilton Green, charter CBC member and natural history columnist of Raleigh, N.C.; Mrs. Robert H. Coleman, editor of "The Lesser Squawk," Charleston, S.C.; Mrs. Donald Lacoss (seated), of Rock Hill, S.C.; and Mrs. Louis Miles, also of Charleston.

Below right: Going over plans for the Saturday field trips are CBC Vice-president E.M. Manchester of Lenoir, N.C., and Garvin Hughes of Hickory, N.C., who recently completed a term as CBC vice-president from Western North Carolina. (Photos by Willie M. Morrison.)



found in sizable flocks on the edge of the fields and in orchards. Sunday morning Pine Siskins were reportedly seen for the first time in the trees around the hotel.

Everyone seemed pleased and happy that the birds had cooperated to make our weekend so successful. It turned out to be a Broad-winged Hawk, Red Cross-bill, Rose-breasted Grosbeak, and Tennessee Warbler weekend.—WMM

Sooty Tern at Chimney Rock, N.C.

With excitement in his voice Norman Gregg, manager of Chimney Rock, called me late Saturday afternoon, 8 June 1968, at my Lake Lure, N.C., home. He said that a man had brought to the office a bird that looked like some kind of a gull, and he wanted me to see if I could identify it. Elizabeth Phelps, a member of Carolina Bird Club and president of Phelps Industries of Skyland, was among my guests. On the 4-mile drive I said, "The gull idea worries me; and so does a tern." Elizabeth laughed and said, "Remember that day in July when we were with Chief Pye on Lake Lure and he slowed the motor to point to a log with five American Bitterns sitting on it?" I added, "Yes, and we saw one again that September, and again last January." The Chief had done much to help me with my list of 162 birds in the Lake Lure periphery.

Norman Gregg, his assistant, the finder of the bird, and his young son formed an expectant group around an orange crate when we reached the Rock. As the bird was pulled from the crate, Elizabeth whispered, "Sooty Tern!" I couldn't believe my eyes! Elizabeth produced a Peterson's *Field Guide* so we could all see the picture and agree on the decision. The bird had been picked up on the road from Old Fort. The consensus was that it had been blown off-course and hit the mountainside in the very violent near hurricane winds of the day and night before which had plagued North Carolina from the coast inland. *Chat* (32:63) reported another Sooty found at North Charleston, S.C., on 6 June, apparently a victim of the same storm.

Elizabeth and I accepted responsibility for the tern with no idea what to do next except read Bent and anything else we could find on the species in the ornithological library I have been collecting for the past decade. In the course of our reading we learned from our friend Alex Sprunt that when a researcher had turned loose some Sooties at Hatteras they made the journey to the nesting grounds at Dry Tortugas (70 miles below Key West) in 6 to 8 days. According to *Birds of North Carolina*, the last Sooty Tern seen in North Carolina was in 1955, and eight had been seen previously in the State. Our bird appears to be the first found in the mountains of North Carolina, but the 1957 A.O.U. *Check-list* cites more than a dozen inland records, usually after hurricanes, from such places as Gatlinburg and Knoxville, Tenn.; Wheeling and Charleston, W. Va.; and even from New York and Vermont as well as various points south of the Carolinas.

Elizabeth decided to discard the sardines provided by the gentleman who found the bird, and we began a diet of defrosted ocean perch and shrimp, the only raw seafood available at that hour. We transferred Sooty to a larger box and added sand from Lure's swimming beach. By Sunday morning the bird had become talkative and responsive. Sooty had a loud and insistent "yak" that was used to indicate hunger.

Although an examination of the legs and wings did not reveal any injury, Sooty still had not attempted to fly by late Sunday. Since Elizabeth and I both had to be at our offices Monday morning, we began trying to find a home for our bird, preferably a home with someone who would be able to release him on the Gulf coast if he recovered. We called Barbara Bodman of Baton Rouge, past secretary of Louisiana Ornithological Society and a valuable volunteer worker with George Lowery in the Louisiana State University Museum. Margaret Brown, a member of L.O.S., was planning to return to Baton Rouge on Monday, and she instantly agreed to take Sooty with her. I was banking on Barbara's first interest next to her family—birds! Since she once raised a Laughing Gull and kept it at

her house for a couple of years, I knew she would do her best to restore Sooty. Sooty stayed in a large cage at Barbara's house for two weeks and bathed daily in a dish. When it became necessary for Barbara to leave town, she turned Sooty over to Mr. Felton of the Baton Rouge Zoo. Sooty was placed in a large enclosure with five cages filled with unusual birds. Our wanderer from Tortugas was very active, and the admiring visitors included L.S.U. students who were delighted to see a Sooty Tern. Although Sooty could not fly, the bird seemed to be in good health and was one of the Zoo's show birds.

Unfortunately, I cannot invite you to visit Sooty in Baton Rouge. One night in the middle of August, vandals cut the enclosure wire and opened all the cages. No trace of any bird remained, and I suspect they were removed for sale. Because Sooty could not fly, he should have been found nearby the next morning if they had merely been released by someone opposed to the principle of keeping birds in captivity.—ANNETTE DUCHEIN, Spartan Mills, Spartanburg, S. C.

Reports from Carolina Birders

Albert H. Maxwell Sr., forester, 305 Tate Street, Morganton, N.C., writes: "One sunny afternoon in mid-January, I was amazed to see 25 Cardinals in the yard cracking the seeds and eating the tiny goodies from the yellow poplar or tulip tree. The following day, equally as many Cardinals were again observed feeding on the seeds."

From Mrs. W.H. Lawrence, Sea Oak Lane, Hilton Head Island, S.C., comes the following report: "I had planned to report seeing two Ruby-crowned Kinglets in our yard on Sept. 12, 1968. They seemed to have come along with the Palm Warblers. The warblers are still here but the kinglets have gone. I believe they, or others will return as we usually have them all winter. This is the earliest that we have seen them on the Island."

Mrs. W. Davison, Robinhurst, Roaring Gap, N.C., sent two items that might interest our readers.

On 9 September, after a day of rain, she watched a Catbird pull a wet grape leaf, hold it against its breast, drop it, and preen the wet breast feathers. It then leaned over again, picked up the leaf by its stem and repeated the operation. Mrs. Davison continues, "My Catbirds do not use the two bird baths as the Song Sparrows do. Is this their usual method of bathing?"

On 15 April Mrs. Davison noticed that one of her four Cardinals, a male, was lying on his side feeding on the sunflower feeder with its leg broken at the tibia. He flew well and would not be driven off by another male. By the 19th he had learned to stand on one leg. On 30 May a female Cardinal came to the feeder, watched the crippled one for a few minutes, then moved over to him and fed him several times. When she flew away, he followed her. By 14 July the crippled male arrived with two young fledglings feeding both of them sunflower seeds. In two weeks the young ones were feeding themselves quite capably. Mrs. Davison concludes, "I did not see the female after 14 July and wondered if she was starting another family, but there have been no further new young ones."

Miss Helen Myers reports an unusual winter visitor at her feeders in Lenoir, N.C. On 2 February 1968, Groundhog Day, a Catbird arrived and was seen and heard every day. He stayed on through the summer and raised a family and was still in her garden the last of September.

Mr. and Mrs. Joe L. Lanford, Golf Club Road, Box 485, Hartsville, S.C., were spending 25 September 1968 at Huntington State Park across the highway from Brookgreen Gardens, about 3 miles S of Murrell's Inlet, S.C. They watched hundreds of Tree Swallows lined up on wires as close as they could pack themselves, all facing the same way, showing that the local name, White-bellied Swallow is most appropriate. They were also perched in trees, flying from shrubs to trees and onto the wires even at times flying close to the observers.

General Field Notes

JAMES F. PARNELL, *Department Editor*
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Wilson's Petrels at Cape Lookout

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On 8 June 1968 I saw a considerable number of Wilson's Petrels in the vicinity of Cape Lookout. Frank Chapman of Beaufort, N.C., had alerted me to their presence. On my trip to the Cape there were several petrels a short distance from the ferry. During the day I found a few more, including two around the old jetty in the ocean. Later in the afternoon, while I was waiting on the dock for the return ferry, some six or eight Laughing Gulls congregated on the water nearby and apparently attracted Wilson's Petrels from all over the Bight. At one time I was able to count 22 in this small area.

The following morning at Fort Macon there were two Wilson's Petrels working around the U.S. Coast Guard docks and four more in the ocean near the jetty. Some of these were observed as close as 20 feet. They would fly rapidly downwind a few hundred yards, then slowly work back upwind gliding a few inches above the surface "water walking" and feeding in the manner typical of this species. This activity took place within a few hundred yards of the beach. On a few occasions they actually started an upwind run over the sand and into the breaking surf. Later in the morning I found two more petrels near fishing piers further down Bogue Banks. One of these was briefly over the sand in an area occupied by numerous bathers.

Wilson's Petrels are quite common a few miles off shore during the summer months and there have been numerous sightings on the immediate coast. Generally, however, these records are of one, two, or three individuals. The presence of larger numbers on this occasion might have been associated with an early tropical storm (Abby) which, a few days earlier, worked its way up the Florida coast and into Georgia and South Carolina.

Mallard Breeding in Barnwell County, S.C.

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1 August 1968

On 27 May 1965, while walking along the edge of a Carolina Bay near Williston in Barnwell County, S.C., I flushed a hen Mallard (*Anas platyrhynchos*) with three small young. The adult feigned injury. On 4 July, a hen and one large unfledged bird were seen together in the same part of the bay, and presumably were the same birds. I described this Carolina Bay in the *Chat* (25:88). Since the bay is isolated from any farms and the birds were very shy, they would appear to be wild.

In mid-April 1959 J.B. Hatcher reported a Mallard nest with 12 eggs in the AEC Savannah River Plant area in Aiken County, S.C. (*Chat*, 23:63-64). On 4 May 1965 Hatcher showed me another Mallard nest with 10 eggs in the AEC area. The Williston Bay is about 25 km E of the AEC area nesting sites. *South*

Carolina Bird Life (Sprunt and Chamberlain, 1949) lists no nestings of wild Mallards in South Carolina.

[Most reference books indicate that the Mallard reaches a southern limit of its nesting range in Virginia. However, in recent years there have been several records of nesting Mallards in North Carolina. There is also evidence that other species of ducks are extending their ranges southward into the Carolinas (see *Chat*, 26:89-90). While some of the southern nesting Mallards are probably feral birds, it appears likely that this species is extending the southern limits of its nesting range into the Carolinas.—*Dept. Ed.*]

Present Status of the Redhead on the Atomic Energy Commission Savannah River Plant Area of South Carolina

JOSEPH R. FATORA

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29 June 1968

The Redhead (*Aythya americana*) is considered a scarce and rather irregular winter visitant on the AEC Savannah River Plant south of Aiken, S.C. The SRP is located along the Savannah River in the upper coastal plain in the state's west-central section. The author, through personal observations and records of reliable observers, has been in close contact with the area from March 1964 to June 1968. Apparently the Redhead has been recorded only twice during this four-year period. Both observations were on Par Pond, a large artificial impoundment located in northern Barnwell County.

Three Redheads, two drakes and a female, were sighted in a cove of the western prong of the lake on 25 November 1966 by Richard Conley and the author (Fatora and Conley, 1967). The males appeared to be in full winter plumage. These birds were observed for several minutes at a range of approximately 40 yards through 7 X 35 binoculars. Lighting conditions were excellent, and the reddish-chestnut head and neck of the drakes were readily discernible, as were the characteristic high-domed head and abrupt forehead. The second observation was by Harmon P. Weeks Jr., John R. Sweeney, and James M. Sweeney in November 1967. A drake and female were seen on 12 November and two drakes and a female were found feeding with scaup on 18 November.

These two observations constitute an addition to the species list of the avifauna of the Savannah River Plant (Norris, 1963). Norris, whose extensive notes covered a period from 1955 to the fall of 1962, did not observe a Redhead on the area. Sprunt and Chamberlain (1949) state that this species is one of the lesser known ducks of South Carolina, having the status of an uncommon, erratic, winter visitant statewide, and occurring most frequently along the coast. This duck is often a solitary bird in South Carolina, with a pair or small group seen now and then. Burleigh (1958) also records it as a locally uncommon transient and winter resident in neighboring Georgia. Murphy (1937) considered the Redhead as an irregular winter visitant about Augusta, Georgia, noting but a single bird from 1933 through 1937. A specimen was taken in Richmond County, Georgia, across the Savannah River and slightly N of the SRP, in 1907.

Part of the data for this paper was obtained incidentally while the author was conducting bobwhite quail research supported by a cooperative project of the University of Georgia School of Forest Resources, Georgia Forest Research Council, and the College Experiment Station of the University of Georgia College of Agriculture Experiment Stations under McIntire-Stennis Project 12 on the lands of the Atomic Energy Commission's Savannah River Plant. The author is indebted to Richard Conley, James M. Sweeney, John R. Sweeney, and Harmon P. Weeks Jr. for permission to publish their observations.

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American Golden Plover and Other Spring Shorebird Observations at Southern Pines, N.C.

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Southern Pines, N.C.

24 May 1968

Little River Farm lies about 6 miles N of Southern Pines, N.C. Most of this farm is open pasture with Little River and Wads Creek crossing the main pasture. Usually there are several small pools of water in this pasture.

On 23 March 1968 I discovered 16 large plovers standing in the pasture. After several minutes of careful study they were identified as American Golden Plovers (*Pluvialis dominica*) in winter plumage. The solid rump, light axillars, and the habit of raising the wings above the back upon landing were noted. The birds had speckled brownish-gray backs and a distinct eye-line. In bright sunlight the specks had a golden appearance. Wing-stripes were either very faint or absent. With the plovers were about 20 Pectoral Sandpipers (*Erolia melanotos*) and 2 Lesser Yellowlegs (*Totanus flavipes*).

Most of the plovers were still present on 24 March as were 25 Pectoral Sandpipers. At Thaggard's Lake, about 3 miles from Little River Farm, I found 1 Golden Plover, 1 Greater Yellowlegs (*T. melanoleucus*), 3 Lesser Yellowlegs, and about 30 Pectoral Sandpipers on the exposed mud flats. By 30 March all of the Golden Plovers were gone from Little River Farm, although 5 or 6 Pectoral Sandpipers remained. At Thaggard's Lake 50 Pectoral Sandpipers were seen on 31 March, and 2 lingered through 12 April. Nineteen Greater Yellowlegs were present on 6 and 7 April. Twelve Lesser Yellowlegs were found on 30 and 31 March, and 2 remained through 12 April. Three Golden Plovers were at Thaggard's Lake on 30 March, and the last 2 were seen there the following day. Three Least Sandpipers (*E. minutilla*) were at Thaggard's Lake on 6 April. Killdeer (*Charadrius vociferus*) and up to 20 Common Snipe (*Capella gallinago*) were recorded at both Little River Farm and Thaggard's Lake on several occasions between 23 March and 12 April. It should be noted that Thaggard's Lake was nearly full on 12 April, and that the shorebirds had remained until all mud flats were covered.

Golden Plovers are rare inland in North Carolina at any time, but especially during the spring migration. Large numbers of Pectoral Sandpipers are also quite unusual during the spring. Both species migrate almost exclusively northward up the Mississippi Flyway (Pough, 1951, *Audubon Water Bird Guide*). During the days immediately preceding 23 March a late winter snow storm lashed much of the Mississippi valley. It was immediately following the passage of this storm that the first plovers and sandpipers were seen. It appears that these birds were displaced eastward by this storm.

These observations were verified by Mary K. Wintyen, L.M. Godwin, and Tom O'Connell. Mr. O'Connell was familiar with both the American Golden Plover and the Pectoral Sandpiper from previous observations in Massachusetts. Color slides were made of both species.

[There is only one previously known spring record of the American Golden Plover from North Carolina. Sykes (*Chat*, 29:53-54) found a single bird in a pasture in Wake County on 3 April 1965.—*Dept Ed.*]

High Altitude Nesting of the Eastern Phoebe In the Great Craggy Mountains

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29 July 1968

Although Pearson, Brimley, and Brimley (*Birds of North Carolina*, 1942) noted the occurrence of the Eastern Phoebe (*Sayornis phoebe*) throughout North Carolina, no mention was made of altitudinal limits for nesting in the mountain region. The only such information comes from Stupka (*Notes on the Birds of Great Smoky Mountains National Park*, 1963) who states that the bird rarely ventures above 3,000 feet in the Great Smoky Mountains, although its nests have been found as high as 4,500 feet at Lickstone Fire Tower and 4,888 feet at Cataloochee Ranch. Brewster (*Auk*, 3:94-112, 173-179, 1886) also maintained that 3,000 feet was the usual limit for the phoebe's occurrence, while Burleigh (*Auk*, 58:334-345, 1941) mentioned that the bird was rarely observed above 4,000 feet on Mt. Mitchell. Although Cairns (*Orn. and Ool.*, 14:17-23, 1889) stated "I have found them at the highest point of the Black Mountains," he did not say anything about locating nests at such high altitudes.

In June 1959, 1961, and 1962 I observed Eastern Phoebes at 5,520 feet near the Blue Ridge Parkway tunnel just N of Pinnacle Gap in the Great Craggy Mountains. During these years I made no effort to search for nests, although a pair was noted near the entrance to the tunnel on each visit. Then on 21 June 1964 I located a nest of this species under a sheltered ledge on the vertical rock cut adjacent to the Parkway and about 20 feet S of the tunnel entrance. The nest was situated about 15 feet above the pavement, and I was unable to scale the steep, wet rock cut to determine the number of eggs or young. The nest was quite difficult to see, and I was able to locate it only by flushing the bird and carefully watching its return to the spot. Before the advent of civilization, the phoebe nested almost exclusively on such ledges, although it is unusual to find them in such sites today. I have visited this spot on numerous occasions since 1964, but have never found the birds again.

Wing Flashing by Catbirds in Presence of Snakes

ELOISE F. POTTER

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9 September 1968

On 22 June 1967 I noticed a Catbird wing flashing about 3 feet from the foundation of my house near Zebulon, Wake County, N.C. Upon investigation I found an Eastern Hognose Snake less than a foot long lying between the bird and the wall. The snake had performed its convulsions and death act as a defensive measure. The Catbird was not heard uttering any sound or observed attempting to strike the snake.

On 23 July 1968 I followed a 3-foot-long Black Rat Snake across my wooded yard for about 100 feet. Just as the snake and I approached the spring, a Catbird and a Brown Thrasher flew directly toward the snake in spite of my unconcealed presence. The Catbird silently flashed its wings as the snake slithered into the water. The Brown Thrasher remained close to the Catbird until the snake was out of sight, but did not engage in the wing flashing. Neither bird uttered a sound or made any attempt to strike the snake.

These silent reactions to the presence of a snake are in sharp contrast to the usual descriptions of raucous cries by hordes of jays and other species.

Swainson's Warblers Found Breeding in Moore County, N.C.

JAY CARTER

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On 19 May 1968 I was birding at a bridge that crosses Little River about 1 mile from the town of Vass in Moore County, N.C. I was watching a Louisiana

Waterthrush (*Seiurus motacilla*), when loud calls drew my attention to two small brown birds which flew across the road behind me. A short time later I identified one of these birds as a Swainson's Warbler (*Limnothlypis swainsonii*), the first I had ever seen in Moore County. Its excited actions and tendency to remain close by indicated the possibility of a nest. A short search led to the discovery of the nest only a few feet away. It contained two eggs, one of the warbler and one of a Brown-headed Cowbird (*Molothrus ater*). The warbler egg was cream colored with a definite pinkish tinge.

The nest was located in a canebrake about 30 feet from the road. It was supported by cane stalks and smilax vines and was about 4 feet above the ground. The habitat was typical of that found along the large watercourses of the Sandhills region. The larger trees were primarily gums, oaks, and maples. Holly trees formed a sizable portion of the secondary growth present. The underbrush was primarily cane and smilax often growing in dense tangles. The cane around the nest averaged between 6 and 7 feet in height.

The nest still contained the two eggs on 24 and 26 May. On 1 June the eggs were found to have recently hatched. By 7 June both young birds were beginning to acquire feathers. On 9 June the nest was empty. Bad weather for the next few days prevented any further checks on the young birds. The adults were difficult to observe at the nest, especially prior to the hatching of the eggs. They responded to intrusions by scolding loudly from the surrounding thickets. Never during the period of observations were the adults heard in song.

On 2 June a second nest of the Swainson's Warbler was discovered in extreme southern Moore County. It was located about 7 feet from the bank of Drowning Creek in a tangle of smilax vines. It was about 2 feet above the ground. When discovered this nest contained two young warblers, which were gone when the nest was rechecked on 7 June. No cane grew in the immediate vicinity of this nest, although it was abundant across the creek from the nest. The vegetation at the two nest sites was generally similar and both streams were 15 to 20 feet wide. Both areas are easily flooded during periods of heavy rainfall.

From observations of these two nests it seems probable that the Swainson's Warbler is a regular but uncommon breeding species along the larger streams of the North Carolina Sandhills. Much more field work needs to be done here and in other areas of the central Carolinas to determine the range of the Swainson's Warbler.

There are few records of this warbler in the coastal plains of North Carolina with the most western of these being from Red Springs in Robeson County, in 1935 (*Birds of North Carolina*, 1959). A recent record from Sumter County, S.C. (*Chat*, 31:77) had a similar relation to the fall line.

Western Meadowlark at Raleigh, N.C.

H. LEE JONES

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7 October 1968

On 21 January 1968, while birding at Lake Wheeler, 10 miles S of Raleigh, I heard what appeared to be the song of a Western Meadowlark (*Sturnella neglecta*) coming from among a widely scattered flock of Eastern Meadowlarks (*S. magna*). With me at the time were Mike Browne and Dale Lewis. An attempt to locate the bird was unsuccessful. Nearly a month and a half later on 3 March, Mike Browne, Dale Lewis, and Phil Warren heard the bird again in the same locality and were fortunate enough to observe it while it was singing. They commented on the bird's pale coloration, and while this character is itself not a wholly reliable criterion, it is another indication that the bird in question was *S. neglecta*. Repeated attempts to collect the bird were unsuccessful.

I had heard *S. neglecta* once before in Texas and have heard them many

times since in California and elsewhere. I am convinced that the song heard was that of *neglecta*. However, the question arises as to whether the bird was actually *neglecta* or an individual of *magna* which, perhaps, had been raised in an area where the two species are sympatric and had learned the song of *neglecta* during the period of song development. The latter case seems very unlikely, although it is remotely possible. Wesley Lanyon, the recognized authority on these two closely related species, comments (personal communication) that "song from an isolated male meadowlark, well out of its normal range should be quite reliable as to species identity. I would place less reliability on song in a region where both species occur, yet even in such circumstances the number of males that 'go wrong' during their song development must be very, very low."

The Western Meadowlark has been spreading eastward throughout most of its breeding range in recent years and now breeds across Ontario, with isolated records of occurrence from New York, New Jersey, and Massachusetts in the Northeast (*Audubon Field Notes*). In the Southeast there have been numerous reports from western Tennessee, Mississippi, Alabama, and the Florida panhandle (*Audubon Field Notes*), along with a sight record from Georgia (*Audubon Field Notes*, 13:285) and a specimen from South Carolina (*Chat*, 22:46). There is a nesting record from Memphis, Tenn., in 1951 (*Audubon Field Notes*, 5:295). The current record is the second from North Carolina. The first record came when Paul Sykes heard the song of *S. neglecta* on 30 November 1965 at Pea Island (unpublished).

[I feel that a comment here on the general acceptance for publication of species identified on the basis of song is in order. Such acceptance is based primarily on two factors. First, only cases where the author is familiar with the song of the species in question and with those species with which it may be confused are acceptable. Second, this should always be a last resort to be used when visual identification or separation is impossible.—*Dept. Ed.*]

BRIEFS FOR THE FILES

Compiled by JAMES F. PARNELL
(all dates 1968)

Audubon's Shearwater, one was seen over the inlet between Shackleford and Core banks, N.C., on 10 August by Frank Chapman.

White Ibis, 2 immature birds were found at Raleigh, N.C., between 27 July and 17 August by Harry LeGrande.

Roseate Spoonbill, a single immature bird was seen with a flock of White Ibis at Dixie Plantation near Charleston, S.C., by John Henry Dick.

Black Duck, 3 seen near Raleigh on 17 August were early, Harry LeGrande.

Peregrine Falcon, single birds were seen at Doughton Park in the North Carolina mountains on 29 September by C.R. Hough and at the Pea Island National Wildlife Refuge in eastern North Carolina on 30 October by James Pullman.

Pigeon Hawk, single birds were seen on 30 October and 1 and 2 November at Pea Island and on 1 November at Hatteras Village, N.C., by James Pullman. A single bird was seen near Raleigh on 21 September by Mike Browne and Harry LeGrande.

Sparrow Hawk, a flight of 24 was seen moving south over Topsail Island, N.C., on 26 October by Gilbert Grant.

Semipalmated Plover, several were seen inland at Chapel Hill, N.C., on 29 September by James Pullman.

- Upland Plover**, one was seen at the Wright Memorial near Nag's Head, N.C., on 10 September by Lee Jones. Four were found at the airport at Beaufort, N.C., on 26 July, where 14 were found on 14 August, Frank Chapman.
- Sanderling**, one was found inland at Chapel Hill on 14 September, James Pullman.
- American Avocet**, one was seen on 17 and 27 October at Huntington Beach State Park, S.C., by Frederick Probst. Two were seen at Glendale Springs on the Blue Ridge Parkway on 22 September by Gardner Gidley. They were utilizing the shallow edges of a 6 acre pond.
- White-rumped Sandpiper**, on 11 September two were seen at Oregon Inlet in the Cape Hatteras National Seashore and 2 were at Pea Island, Lee Jones.
- Short-eared Owl**, one was seen near Raleigh at Lake Wheeler on 6 October by Harry LeGrande.
- Common Nighthawk**, two were late at Highlands, N.C., on 2 October, C.H. Ekdall.
- Chimney Swift**, a single bird seen on 26 October at Topsail Island, N.C., by Gilbert Grant was quite late.
- Western Kingbird**, one was discovered on the telephone wires at Pea Island on 11 September by Lee Jones.
- Red-breasted Nuthatch**, first seen at Raleigh on 8 October by Harry LeGrande. They were found to be common atop Mt. Mitchell on 19 October and at Richland Balsam Mountain on 21 October by James Pullman. A single individual was found on 26 October on the coast at North Litchfield Beach, S.C., by Frederick Probst.
- Water Pipit**, an early flock of 8 was found at Raleigh on 2 October, Fred Johns.
- Catbird**, an albino was found at Ronda, N.C., on 5 September, Lin Hendren.
- Philadelphia Vireo**, one was found at the Pea Island Refuge on 11 September by Lee Jones, and one was seen at Doughton Park on 29 September, C.R. Hough.
- Prothonotary Warbler**, a single individual at Pea Island on 12 September was somewhat late, Lee Jones.
- Wilson's Warbler**, one was seen at Pea Island on 12 September by Lee Jones, and an immature bird was found in County Line State Park on Kerr Lake, N.C., on 2 September by Eloise Potter.
- Baltimore Oriole**, a male was present on the early date of 8 September at Summerville, S.C., Louise M. Button.
- Evening Grosbeak**, approximately 30 were reported from Raleigh on 3 November by Harry LeGrande. At Winston-Salem 12 were seen on 10 November by R.H. Witherington. They were reported at Hillsborough by Charles Blake and Mrs. R.J. Murphy on 17 November. On 19 November Mrs. T.L. Maxwell and Mrs. A.E. Morrison observed a flock of 150 to 200 grosbeaks in the Maxwell yard in Hartsville, S.C. They were feeding on maple seeds, cherry laurel, and broadleaf privet berries. All dates are very early.
- Purple Finch**, a single bird was found at Pea Island as early as 12 September by Lee Jones. Across Oregon Inlet at Bodie Island one was found on 22 September by Henry Haberyan. They were present at Hillsborough, N.C., as early as 17 November, Mrs. R.J. Murphy.
- Lark Sparrow**, one was seen at North Litchfield Beach on 30 and 31 August, Frederick Probst. One was seen near Nag's Head on 10 September, and 2 were found at Bodie Island on 12 September by Lee Jones. A single bird was also found in lower Richland County, S.C., on 23 September by Kay E. Sisson and Annie R. Faver.
- White-crowned Sparrow**, a single bird was observed on the South Carolina coast at North Litchfield Beach on 24 October by Frederick Probst.

CORRECTION—The Briefs for September 1968 listed a White Ibis at Southport on 14 August. This should have been Beaufort, N.C.

BOOK REVIEWS

(Continued from page 89)

Birds of the Rio Grande Delta Region: An Annotated Checklist

L. Irby Davis. 1966. 54 p. \$1.00. (available from L.I. Davis, Box 988, Harlingen, Texas)

Like southeastern Arizona, the Rio Grande delta has long been a mecca for bird watchers who want to see typical Mexican species without crossing the border. With this in mind, Irby Davis, the recognized authority on the Delta, has drawn from his many years of experience to compile this very helpful checklist. Over 370 species are described in terms of season, abundance, and habitat preference, while a brief introduction discusses the geology and botany of the region. The only drawbacks to the book are the lack of a good map and Davis' occasionally unorthodox and confusing statements on taxonomy. Nevertheless, this work provides an excellent introduction to the avifauna of the lower Rio Grande valley; and bird watchers visiting the area will find it indispensable.--MARK SIMPSON JR.

BIRD WATCHERS' ROUNDTABLE

(Continued from page 92)

Occasionally there is a heavy flight of Common Nighthawks passing through on the fall migration. This would be about the first of September and, of course, in the late afternoon. I have seen a flight of thousands in the valley between Blowing Rock and Grandfather Mountain, but this is unusual.

As I said in the beginning, birds are where you find them. Remember, these walks I have pointed out are not for exercise. They are for enjoying nature. Go slow. Take your time. Sit down and rest awhile. I saw three red foxes trotting up the road while standing near the Cone graves on Flat Top.

BIRD MIGRATION THROUGH AN ABANDONED FARMSTEAD

(Continued from page 90)

Unlike the various transients observed, these assumed summer residents were often heard singing. Wetmore (*The Migrations of Birds*, 1927, p. 43) commented that it is not unusual to see birds taking off over large bodies of water when these are encountered in the birds' migration paths. Likewise, an observer stationed at the edge of the north side of a large body of water can note the first appearance of migrating birds. Apparently my location at the farmstead provided me with some advantages usually to be had only in association with large bodies of water.

Certainly all of us can cite experiences when we have known of migrating birds tarrying in an area for much longer periods of time than a few minutes. However, there are apparently occasions when birds do not stop long enough in one place to give an opportunity for an observer to summon his friends to the scene so they can share the experience of seeing the birds.

Entomology Research Division, Agricultural Research Service, USDA
Oxford, N.C.

8 June 1968

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Carolina Bird Club is an incorporated association for the study and conservation of wildlife, particularly birds, chiefly in the Carolinas. Founded in 1937 as the North Carolina Bird Club, it was joined in 1948 by several South Carolina natural history clubs and the name changed to the Carolina Bird Club.

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The Carolina Bird Club, Inc., is a non-profit educational and scientific organization. Dues, contributions and bequests to the club are deductible from State and Federal income and estate taxes. Membership is open to anyone interested in birds, natural history and conservation. The several classes of membership are listed below. Checks should be made payable to Carolina Bird Club, Inc., and sent to CBC Headquarters, Box 1220, Tryon, N.C. 28782.

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THE CHAT

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All papers, census reports and notices for publication in *The Chat* should be sent directly to the Editor. However, items intended for the General Field Notes, Backyard Birding, or Conservation departments should be sent to the respective department editors.

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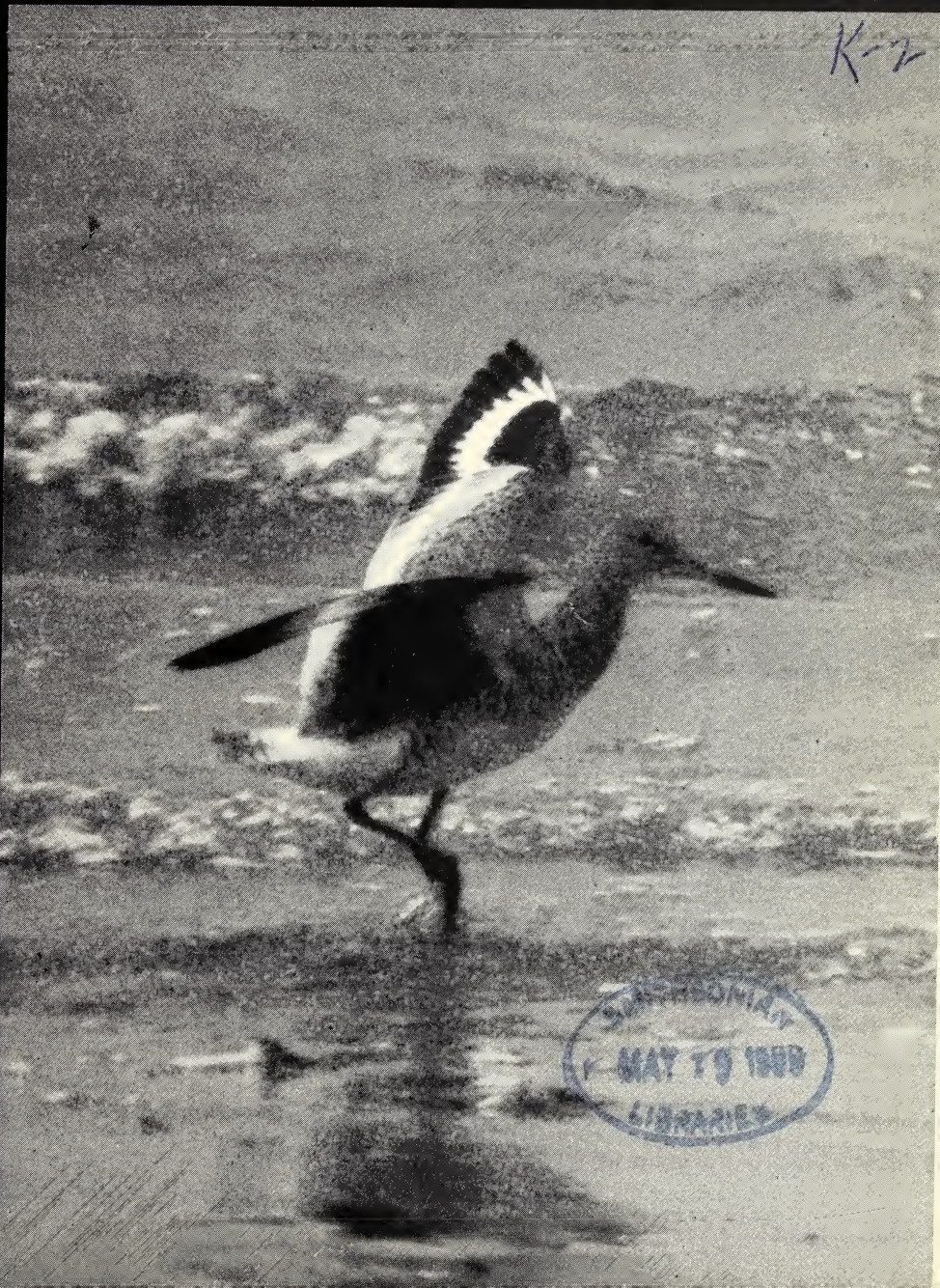
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OUR COVER—Jack Potter photographed a Willet alighting on the shore at Battery Island, N.C. Doug Pratt contributed drawings of the Carolina Parakeet (p. 5) and the Swallow-tailed Kite (p. 24).

A REVIEW OF THE PINE GROSBEAK RECORDS FROM THE CAROLINAS

H. LEE JONES

According to the Fifth Edition of the American Ornithologists' Union *Check-list* (1951), the Pine Grosbeak (*Pinicola enucleator*) is found in winter "south to . . . Kentucky and Virginia." The race *P.e. leucura* ranges south to Nebraska, Kentucky, Maryland, Massachusetts, southern Maine, and Newfoundland; and the race *P.e. eschatosus* has been found south to Wisconsin, northern Ohio, Pennsylvania, and Virginia (Shenandoah National Park). The *Check-list* includes six other races, all of which are found chiefly west of the Great Plains. In recent years there have been several sight records from the two Carolinas. I know of no specimens from either North or South Carolina; however, the evidence presented below should warrant inclusion of the Pine Grosbeak on both the South Carolina list and the North Carolina list by the standards set up by the Carolina Bird Club Records Committee as outlined in *The Chat* (32:26).

The first evidence of Pine Grosbeaks in the Carolinas came from Highlands, N.C., when Toliver Crunkleton saw two birds on 13 September 1951 (D.W. Johnson, *Journal of the Elisha Mitchell Scientific Society*, 80:37, 1964). Because of the unusually early date and the absence of other records from the Southeast at that time, Mr. Crunkleton believed that these birds may have been escaped captives. Since Pine Grosbeaks are scarce in captivity, the possibility of seeing an escaped bird is highly unlikely. Recent records since that date plus the fact that many finches, including the Pine Grosbeak, wander rather widely after the breeding season, lend support to the evidence that these were wild birds. Also, during the winter of 1951-1952 there was an unusually heavy flight of Pine Grosbeaks that reached south in the Appalachians to Maryland, West Virginia, and Shenandoah National Park, Virginia (*Audubon Field Notes*, 6:189,190,195).

On 12 March 1962, ten and a half years after Crunkleton's record, Ted Beckett discovered an adult pair in his yard at Magnolia Gardens near Charleston, S.C. (*Chat*, 29:28). This observation by Mr. Beckett constitutes the first published record of the Pine Grosbeak in South Carolina. One month later, on 9 and 10 April 1962, five individuals were seen at Mt. Olive, N.C. (*Chat*, 26:77). There are two additional records from South Carolina. Three were seen at Winnsboro, Fairfield County, on 15 January 1964 and confirmed by Kay Sisson three days later (*Chat*, 28:72). On 2 January 1965, two females or immatures were seen on the Charleston Christmas Count (*Chat*, 29:28).

Pine Grosbeaks were recorded in the Carolinas for the third consecutive winter when Phil Warren found an adult male near Wilson, N.C., on 20 December 1965. Since this record is published here for the first time, I will present the details of the observation as taken from notes given to me by Mr. Warren. Warren studied the bird through 7X35 binoculars at a distance of approximately 25 feet. The wingbars were very distinct; and the feathers of the head, back, and breast had a pinkish cast. Warren had never seen a Pine Grosbeak before this date, but he was convinced of his identification after reading the field guides.

The latest record of Pine Grosbeaks in the Carolinas is of three seen on the Stanly County Christmas Bird Count 29 December 1967 near Morrow Mountain State Park (*Chat*, 32:24).

From the few records we have, it would be difficult to make any correlation between the appearance of Pine Grosbeaks and the periodic invasions of other northern finches in winter; however, a few interesting facts are forthcoming upon examination of Table 1. During the past seven winters, the two winters that

TABLE 1. Pine Grosbeak records in the Carolinas since the winter of 1961-1962 as compared with Christmas Bird Count totals for Evening Grosbeaks, Purple Finches, and Pine Siskins.

Winter	Pine Grosbeak		Christmas Bird Count Totals			Finch Invasion General Rating
	Records		Evening	Purple	Pine	
	no./individuals		Grosbeak	Finch	Siskin	
1961-1962	2	7	134	410	118	heavy
1962-1963			10	269	27	light
1963-1964	1	3	284	863	3348	heavy
1964-1965	1	2	11	204	16	light
1965-1966	1	1	840	1889	5766	very heavy
1966-1967			2	330	27	light
1967-1968	1	3	12	1309	87	moderate

Pine Grosbeaks were not reported in the Carolinas were also poor years for Evening Grosbeaks (*Hesperiphona vespertina*), Purple Finches (*Carpodacus purpureus*), and Pine Siskins (*Spinus pinus*). During the winter of 1964-1965, however, which was a poor finch winter in general, there was a report of two Pine Grosbeaks from Charleston. There has been at least one observation of Pine Grosbeaks in the Carolinas every winter since 1961-1962 in which there was any significant invasion of the three winter finches mentioned above.

An examination of reports in *Audubon Field Notes* from New England and the Middle Atlantic States where Pine Grosbeak records are more numerous reveals that periodic invasions of these birds parallel very closely the invasions of other finches, especially Evening Grosbeaks, redpolls, and crossbills. During the winter of 1961-1962, Pine Grosbeaks invaded New England, New York, and Pennsylvania in unprecedented numbers (*Audubon Field Notes*, 16:314,315,319). This was also the only winter thus far in which there has been more than one record for the Carolinas. The total of seven individual birds reported, two at Magnolia Gardens and five at Mt. Olive, is more than twice that of any other winter.

Department of Zoology, University of California, Los Angeles, California 90024
1 November 1968



BIRD WATCHERS'

Roundtable

In anticipation of the joint Spring Meeting of CBC and the Georgia Ornithological Society, J. Fred Denton of Augusta has graciously authored our column for this issue of *Chat*. Dr. Denton knows the Augusta region from many years of field work, and we hope that his suggestions will entice our readers into exploring this ornithologically rich area.—MBS

Bird Finding Around Augusta, Georgia

J. FRED DENTON

Through the years the Augusta area has been one of the best interior localities in Georgia for observing birds. Situated on the bank of the Savannah River at the Fall Line, it has elevation extremes of 180 feet at the Municipal Airport and 450 feet at the Daniel Field Airport. The river flood plain to the east and south of the city has been protected by a levee for many years. Here are to be found extensive cultivated fields intermixed with sloughs and swamps. The cypress, tupelo, and blackgum growing in the swamp areas are draped with Spanish moss. For nearly a hundred years the Merry Brothers and Georgia-Carolina Brick Companies have mined clay in the area thus creating shallow lakes and marshes of more than a square mile in extent. To the west of the city are found rolling Fall Line hills on which pine forests predominate.

The common permanent residents such as the Red-bellied and Downy Woodpeckers, Yellow-shafted Flicker, Blue Jay, Tufted Titmouse, Carolina Wren, Carolina Chickadee, Mockingbird, Brown Thrasher, Cardinal, and Rufous-sided Towhee occur throughout the area. Others are rather restricted in their range and occur either in the river bottoms or in the pine forest.

Some of the more accessible areas with directions for reaching them and the birds that might be found there in late spring are described below.

Savannah River Bottoms. Drive east on Broad or Greene Streets to East Boundary, continue on Route 28 for .75 miles and turn right on Lover's Lane. This lane passes through several kinds of habitats for breeding birds: hayfields where Eastern Meadowlarks and Grasshopper Sparrows are abundant; hedgerows, dividing the hayfields and fringing the roadway where Painted and Indigo Buntings are common; lagoons, bordered by moss-hung cypresses and tupelos, where Prothonotary, Parula, and Yellow-throated Warblers are abundant; and drier

woods where Hooded and Kentucky Warblers are common. In some years Dickcissels nest in the hayfields and Mississippi Kites feed over them.

At the end of 3 miles Lover's Lane ascends the levee and continues on it for another 4 miles to the Lock and Dam at New Savannah. The top of the levee offers a vantage point for observing soaring hawks, including the Mississippi Kite. Several short side roads offer a chance to listen and search for the Swainson's Warbler where cane is present. In the cottonwoods and willows growing in the borrow pit an occasional pair of American Redstarts can be found breeding at the southeastern limit of their range. Various migrants and lingering winter residents are likely to be found.

Merry Brothers Brickyard Ponds. Proceed as above to East Boundary and turn right. Follow this street south to its end at the ponds and obtain permission to explore the area from the concessioner. Various herons frequent the area winter and summer. Species that breed there include the Pied-billed Grebe, Least Bittern, Common Gallinule, American Coot, and King Rail. Many migrant water and shorebirds are attracted to the area. In the swamp behind the ponds one might glimpse the Barred Owl, Pileated Woodpecker, and many migrant passerines.

Municipal Airport. Go west on the Gordon Highway and turn south on New Savannah Road and follow it to Airport. In the pastures and hedgerows along the road many resident and migrant species can be observed. At the airport Horned Larks reach the southeastern limit of their breeding range. Grasshopper Sparrows are abundant and occasionally Dickcissels nest here. Mississippi Kites might be observed soaring over the field.

New Savannah Lock and Dam. This area can be reached from the levee road or by taking a left turn at the north end of the airport. This recreation area with its mature hardwoods is frequented by woodpeckers, including the Pileated. Here titmice, chickadees, and the common warblers nest. In the canes at the back of the area Swainson's Warblers usually nest. One or two pairs of redstarts might be nesting along the creek. Migrating thrushes and warblers are usually present in the area.

South Carolina River Bottoms. To reach this area cross the 13th Street bridge and turn right at the first traffic light. Proceed one block on Buena Vista and turn right to the river. In the narrow river flood plain will be found various habitats, including some small ponds. Birds to be found here, in addition to migrants, are the same as on the Georgia side of the river.

The species not occurring in the river bottoms and to be found in pine woods in the hills are Red-cockaded Woodpecker, Brown-headed Nuthatch, Pine Warbler, and Bachman's Sparrow.

Finding Birds in South Carolina: Information Requested

The editors of this column are beginning work on a brochure titled *Finding Birds in South Carolina*, which will be published by the South Carolina Department of Parks, Recreation, and Tourism. If you have any favorite areas that you think should be included in such a brochure, please send the information to us.

ROUNDTABLE EDITORS:

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Conservation

. . . with Marie Mellinger

Chattooga River Seminar

The Georgia Natural Areas Council and the U.S. Forest Service (with personnel from Georgia, North Carolina, and South Carolina) sponsored the Chattooga River Seminar, held at Dillard, Georgia, 20-21 November 1968. Robert Hanie and Dr. Charles Wharton of the Georgia Natural Areas Council, and Darrell Westerberg, National Forest Supervisor, welcomed the delegates and stated the purpose of the Seminar as being "to set in motion Public Law 90-542, to provide for a National Wild and Scenic Rivers system, and the inclusion of the Chattooga River in such a system."

Geographical orientation and long range National Forest planning was given by Forest Service personnel. It was stated that the upper part of the Chattooga River in North Carolina is already highly developed, and it was not possible or practical to include all the headwaters in the proposed wild and scenic river area. The Chattooga River to be included under the Wild and Scenic Rivers Act was defined as the part of the river between Lake Cashiers, North Carolina, and Lake Tugaloo on the Georgia-South Carolina boundary.

In the study to be carried out by the National Forest Service, causes of pollution, siltation, and eroding of banks would be studied and a fishing survey carried out. The possibility of a stream clearing project to remove debris and maintain trout habitat was also discussed. The river needed to be mapped for canoers, and its canoeability by beginners, intermediates, and experts defined.

There are three existing scenic areas near the Chattooga, Whitewater, Glen Falls, and Ellicot Rock. Six more National Forest Recreation areas were suggested to supplement these. A major system of trails has been planned to tie in recreation areas with the river, with a possible loop into the Appalachian Trail.

There were also proposed hiking, horseback, and motorbike trails, located some distance from the river, with a tie in with existing state parks. It was emphasized that most of this was still preliminary planning. About 32% of the land bordering on the Chattooga is within Forest Service boundaries.

It was encouraging to note how many organizations and conservation oriented agencies from all three states were represented at this meeting and the great interest shown in maintaining the Chattooga as a wild and scenic river.

Open Space

In a poll recently conducted by *National Wildlife Magazine*, the preservation of natural wilderness areas was listed as the third greatest conservation problem (after pollution and littering). A booklet, *Open Space, Its Use and Preservation*, is available from the Office of Information, U.S. Department of Agriculture, Washington, D.C. 20250, free for single copies. Send a postcard for Misc. Publication 1121.

In a National Press Release, Sid Moody wrote, "In the beginning was the land, all there would be, then and forever, mountain and meadow, forest and prairie. Man came later. He humbled the land. The wide spaces narrowed and narrowed, and it will end only when the suffering land, all of it, is gone, rutted and shorn by man's plow and his axe."

A cheering note—The Ford Foundation has announced plans to provide substantial backing to enable Nature Conservancy, a national non-profit organization, to purchase and preserve the open spaces which Congress designates for protection. Under the Ford Foundation plan, Nature Conservancy will retain the land, as it has been doing on a much smaller scale, until the Federal acquiring agencies can purchase it at cost.

Also cheering, the Department of Interior has designated several refuge areas as proposed wilderness areas, including the Okefenokee, Island Bay, Pascogee Key, and Pelican Island. Included in future plans are Wolf Island and Little Tybee on the Georgia coast.

National Trail System

Of interest to all Carolinians is the proposed system of nation-wide trails. The Conservation Foundation Newsletter states, "Congress for the first time established a nationally protected system of trails in bill S. 827. Immediately designated as components of the system were the Appalachian Trail and the Pacific Crest Trail. The bill also sets standards for including additional trails in the system and provides for a study of 14 other trails as potential additions. The bill authorizes appropriation of \$5.5 million to acquire land for the Appalachian and Pacific Crest Trails."

Most of the trails will follow famous pioneer routes or link National Parks and Scenic Areas. Proposed trails will include the Continental Divide Trail, the Potomac Heritage Trail, and the Natchez Trace.

A movie (28 minutes in color) titled *The American Trail* is available to groups and organizations, free of charge, from the Humble Film Library, P.O. Box 2180, Houston, Texas 77001, or 1212 Avenue of the Americas, New York, N.Y. 10036. This movie was made by the Humble Oil and Refining Company, as a public service, in cooperation with the Bureau of Outdoor Recreation.

Carolina Birds and Birders

. . . with Willie Morrison

Edward von Siebold Dingle

Edward von Siebold Dingle is a rare combination of ornithologist and artist. Although now into his 70s, this native Charlestonian remains extremely busy doing what he likes best, which is studying and painting birds. In 1905, at the age of 12, he painted his first bird picture, a water color of an Eastern Wood Pewee perched on a pine bough, which today hangs on the wall near the entrance to his studio. Up to the present day he has completed nearly 3,000 paintings, concentrating on water colors in the latter part of his career.

While attending the Spring Meeting of the Carolina Bird Club at Mt. Pleasant, S.C., it was my privilege and pleasure to spend an afternoon talking with this gentle, delightful raconteur of the Low Country. Other members with me were Mrs. Paul H. Rogers and her granddaughter, Cathy, and Mrs. Pinckney A. King of Hartsville, S.C.

Mr. Dingle's home is at Middleburg Plantation, about 3 miles from Huger, S.C. The residence is the oldest wooden structure in South Carolina, having been built in 1697 by Benjamin Simons, a French Huguenot, who as a child was taken to the city of Middleburg in Holland to escape religious persecution, hence the name of his home in the Carolinas. It is known as a "single house," two story, one room wide, allowing cross ventilation through windows on two sides of the main rooms, three on the ground floor with bedrooms above.

As we drive through the gates, up a long avenue of ancient live oaks, draped with festoons of Spanish moss, we are greeted by innumerable bird songs. As we park under an ageless magnolia between the house and a small lake, a Great Blue Heron looks us over and continues feeding. Boat-tailed Grackles walk sedately about the yard, while in the distance a dozen sheep graze near the barn. From the porch steps walks the owner, meeting us graciously and inviting us into his home.

We entered the parlor, the oldest part of the house, which still retains the furnishings, charm and atmosphere of colonial times and a way of life that can never be repeated. In this room are many family portraits painted by former Charlestonian artists. On the right wall hangs a floor to ceiling portrait of a lovely lady standing beside a harp.

"That is Jane Ball, a grand-aunt of my wife's and painted by two Bogle brothers of Charleston," he replied as we asked him questions about other ancestors and the history of the house.

"Three generations of Benjamin Simons lived here after the first one received a grant from the Lord Proprietors for 2,000 acres of land. Today I have

about 900 acres left in the plantation. For 75 years the Lucas family lived here, young John Lucas marrying a Simons.

"Then my wife's father, John Ball, whose wife was a Lucas bought the place. After our marriage in 1927, we moved here and it has been my home since then." Since Mrs. Dingle's death some years ago, he has lived alone with his painting and, at times, with only his beloved birds for company.

When we asked about other paintings on the walls, he continued to reminisce, bringing the past vividly to mind: "Over the piano is the portrait of the wife of Isaac Ball who lived here in the 1700s. His picture was painted originally by Samuel Morse, but our picture is a copy. On this wall is a portrait of Elias Ball, the first Ball who came here, painted by Jeremiah Theus, the well known Low Country artist of Colonial days."

Our attention was drawn to an album on the center table containing many color reproductions of a series of 61 paintings of all the warblers of North America, including nestlings, juveniles and adults. These were commissioned by Mr. Drayton Hastie of Magnolia Gardens, Charleston, S.C.

In the dining room, adjoining, are more antique treasures of the Carolina family living in this house for over 270 years. On two walls are Mr. Dingle's own paintings of Cattle Egrets and marsh-hens, while over the mantle hangs a lithograph of Audubon's Turkeys. Drawing our attention to various items in the room, he continues, "Notice the bases of the lamps in this room. They were originally duck decoys. I remodeled them and painted them to resemble specific kinds of ducks, the most colorful ones being the male Wood and Mallard species."

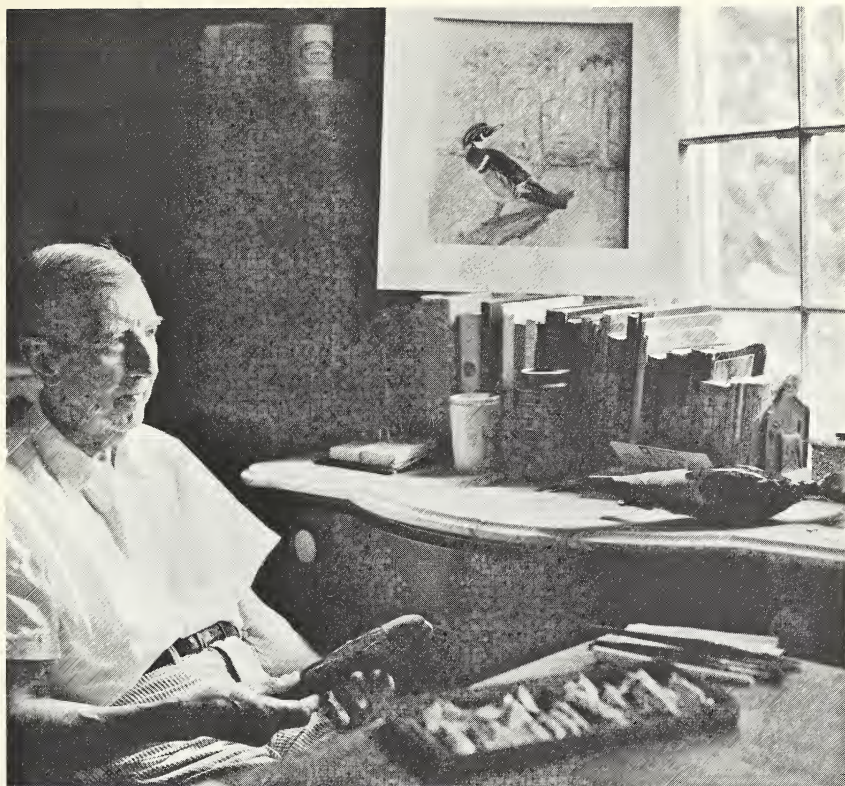
Entering the studio, we could feel that this is where the life of the artist is centered. "This room used to be the 'State Room' or guest bedroom, now my studio," he told us.

A few of his paintings hang on the walls: a group of three Cardinals by one window, Shovelers in a gold frame over the Adam mantle, three Duck Hawks on the limb of a dead tree, a Chukar partridge propped against the back of a sofa, and several water color paintings of hummingbirds at various places around the room. Between the north and west windows stands a tilted table with a half completed hummingbird painting already showing the delicacy and accurateness of the birds painted with the misty and ethereal quality that only Dingle can capture in the distant portions of his landscapes. Ten of his bird paintings appear in *South Carolina Bird Life* and are recognized by these characteristic qualities. He works only on orders and has commissions lined up for several years.

"I like to work on a series," he told us as we asked about the hummingbirds. "After completing paintings of 61 different warblers, I started on this group and have nearly completed it, after which I will start on a group of water birds. Sometime ago I completed a series of 25 life-size paintings of the North American woodpeckers. These were a gift of Mr. B.L. Hanahan to the University of the South, Sewanee, Tennessee."

In the studio are 17 bugproof metal cabinets with dozens of trays or drawers filled with nearly 2,000 bird specimens. Mr. Dingle showed us first the tray of over 60 species of hummingbirds from which he will select specimens to make his paintings accurate and lifelike. When tilted a certain way, the light from the west window brings out all the iridescent colors of these little stuffed bodies, with green and blues predominating, intermixed with golds, reds and orange, colors of a sunset.

An added treat for us is to see for the first time the skins of the Ivory-billed Woodpeckers. When asked if he had collected these skins he replied, "No, I have never seen the Ivory-bill alive. They were reportedly seen in the Santee Swamps in the mid-30s, but my skins, both males and females, were taken in Florida in the 1890s. I bought them from a dealer. Here is another rare skin taken in Florida about 1897." From another drawer he shows us the extinct



Edward von Siebold Dingle, South Carolina's distinguished artist-ornithologist, sits in his studio amid bird skins and reference books as well as paints and brushes. He holds a skin of the extinct Carolina Parakeet. Beside the window is one of his own paintings. (Photo by Leonard Foote, Atlanta Journal and Constitution)

Carolina Parakeet, a miniature parrot of green, gold and red coloring, about the size of a Robin, with the parrot's curved beak, a species not seen alive for over 50 years.

As we left the studio for a tour of his garden, Mr. Dingle continued the conversation, "You have to study the birds in their natural habitats. I have spent most of my life doing field work. I don't get out as much as I used to because of lack of time. From this garden I have watched the Wood Ducks come in from the East Cooper River and perch on top of the house. Pileated Woodpeckers nest in the swamps around here and are commonly seen around the yard. Many species of ducks come in by the scores. I probably have a hundred skins that I have collected and stuffed myself."

We continued our garden tour, seeing 100-year-old camellias, azaleas and his prized Summerville Tea plants (*Thea sinensis*), all protected with chicken wire from the deer that wander into the yard. With great pride he led us down a path to show us the largest and oldest crepe myrtle in North America.

He continued telling of his earlier experiences. "Arthur T. Wayne taught

me how to preserve skins with arsenic, stuff them with cotton and treat them about once a month with bisulphide of carbon. They will last indefinitely."

Arthur Trezevant Wayne was the first and foremost ornithologist of South Carolina. In 1910 he authored the first state bird book, *Birds of South Carolina*, with contributions from The Charleston Museum, edited by Paul Marshall Rea, director, and published in Charleston. Wayne was born at Blackville, S.C., January 1, 1863, finishing Charleston High School in 1880 where two years earlier he began serious studies about birds. From then until his death in the early 1930s, he made his home at Mt. Pleasant, S.C., and engaged in ornithological research.

Edward von Siebold Dingle was born October 18, 1893 in Charleston at the home of his maternal grandparents which still stands at 61 Broad Street. The son of John Rutledge and Agatha von Siebold Dingle, he spent his boyhood years on his father's plantation near Summerton. "Our friends in Summerton always said my mother did not need visiting cards, for while she was ringing the door bell, I would be drawing in the sand with a stick," Mr. Dingle recalled.

Dingle graduated from Porter Military Academy in 1913 and received his A.B. degree from The College of Charleston in 1917. Having enlisted in the Naval Reserves, Dingle did guard duty and served on patrol boats on the Atlantic Coast. He was a member of the first class at the Officer Material School of the Paymaster Corp, U.S.N. at Princeton, N.J.

When Dingle came out of the navy as an Ensign after World War I, he moved to Mt. Pleasant. During the years after the war until his marriage to Miss Marie Guerin Ball, February 6, 1927, when he moved to Middleburg Plantation, he frequently made field trips with his dear friend, mentor and teacher, Arthur Wayne. They tramped the beaches of the Isle of Palms, Sullivan's Island and the other islands near Charleston and up the coast, especially after the tropical storms, looking for rare species brought in by the winds and tides. It was during these years of the early 1920s that Dingle began to paint professionally.

In our conversation with Mr. Dingle, we asked him about the birds that he had added to the State List. He showed us several articles and reprints that he had contributed to various publications such as *Auk* and *Bird-Lore*. According to *South Carolina Bird Life*, Mr. Dingle has added the following species of birds to the State List: Cory's Shearwater, Glossy Ibis, Leach's Petrel, European Widgeon, Hudsonian Godwit, and Clay-colored Sparrow.

After showing us a nest hole of a Pileated Woodpecker saved from a large dead pine recently cut on the plantation, our host rode back with us half way down the drive. There we stopped. With great pride he pointed out the nest of the rare American Bald Eagle, a huge affair of sticks and dead leaves, high in a great pine, several hundred yards away. A family of eagles had been raised there earlier in the spring but by the last of April had left the nest. Mr. Dingle stated that the pair had been here for over 30 years. "The first nest was built in the early 1930s. The tree was killed by lightning in the summer of 1948. The birds built the present nest and used it that same year."

We left through the great gates, carefully closing and latching them. With regret we left behind us the tranquility of Middleburg Plantation and the serenity of Edward von Siebold Dingle.—WMM

CHRISTMAS BIRD
COUNT --- 1968

CHRISTMAS BIRD COUNT --- 1968	COAST		COASTAL PLAIN										PIEDMONT										MTN.					
	Bodie-Pea Is., N. C. 31 December	Wilmington, N. C. 28 December	Hilton Head Is., S. C. 28 December	Beaufort Co., N. C. 31 December	Pamlico Co., N. C. 29 December	New Bern, N. C. 29 December	Wayne Co., N. C. 31 December	Dillon, S. C. 31 December	Columbia, S. C. 20 January	Aiken, S. C. 26 December	Henderson, N. C. 21 December	Raleigh, N. C. 21 December	Durham, N. C. 21 December	Chapel Hill, N. C. 22 December	Greensboro, N. C. 1 January	Winston-Salem, N. C. 29 December	Stanly Co., N. C. 4 January	Charlotte, N. C. 28 December	Greenville, S. C. 1 January	Piedmont, S. C. 24 December	Anderson, S. C. 27 December	Elkin-Ronda, N. C. 26 December		North Wilkesboro, N. C. 21 December	Lenoir, N. C. 28 December	Swannanoa, N. C. 1 January	Great Smoky Mtn. Nat. Park, N. C.-Tenn. 22 December	
Individual totals	22	21	21	236	24	23	57	7	1	3	1185	75	1185	1	237	189	30	1	32	1	1	1	1	1	1	*	1	
Redhead	24	2162	*							3																		
Ring-necked Duck	236	10	21			*			116																			
Canvasback	32	21	205																									
Greater Scaup	6	212																										
Lesser Scaup	137	1	18			44					22				16													
Common Goldeneye	7	1	33													*												
Bufflehead	399	23	57			1					86	24			45				13									
Oldsquaw	3	1	1																									
White-winged Scoter	48	13	35																									
Surf Scoter	64	45	15																									
Common Scoter	138	94	28			6																						
Scoter (sp.?)	12	12																										
Ruddy Duck	2148	155	2			73					153								*									
Hooded Merganser	476	34	26			2					332	12																
Common Merganser	5	*	*			1					4																	
Red-breasted Merganser	543	35	48			*					8	8																
Turkey Vulture	133	1	61			2								*			22		6		1	*					4	
Black Vulture	124	3	102			*					2								1			*						
Sharp-shinned Hawk	15	6	3			1					2						1					*					2	
Cooper's Hawk	7	*	*																								1	
Red-tailed Hawk	99	4	11			2					15	6			2		2		6		1						1	
Red-shouldered Hawk	32	2	1			1					2				2		2		2		1						1	
Broad-winged Hawk	1	1	1																									
Rough-legged Hawk	2																											
Bald Eagle	*	*				*					2																	
Marsh Hawk	59	23	4												3		3		2		5	6						
Osprey	4	*	*								1																	
Peregrine Falcon	2	1	1																									
Pigeon Hawk	7	5	1																									
Sparrow Hawk	280	24	18			29						1			5		5		5		9	12					4	
Ruffed Grouse	5	*	*																								5	
Bobwhite	808	9	47								53	67			44		83		11		15	60					26	
Ring-necked Pheasant	12	12																										
Turkey	1																											
King Rail	5	4	1																									
Clapper Rail	58	11	18																									
Virginia Rail	8	7	1																									

[illegible]

CHRISTMAS BIRD COUNT—1968

ELOISE F. POTTER

Without question, the highlight of the 1968 Christmas Bird Count in the Carolinas was Mike Browne's sighting a Lesser Black-backed Gull in the Bodie-Pea Island, N.C., count area. This is the first known record of the species in North Carolina and may be the southernmost occurrence along the Atlantic seaboard. Details of the sighting are in the local count summary.

Except for the Lesser Black-backed Gull, the present count has few surprises. It confirms what everyone with sunflower seeds in his feeder already knew: this is a major finch winter in the Carolinas. Total individuals for Evening Grosbeaks, Purple Finches, and Pine Siskins are 1,946, 1,551, and 1,869 respectively. Considering the extraordinary number of northern finches in the Carolinas this winter, the Common Redpoll, Pine Grosbeak, and White-winged Crossbill are conspicuous by their absence, though some may be reported later in the season. The number of Red Crossbills is unusually low for a finch winter, and all eight were found in the Great Smoky Mountains. The number of Pine Siskins is much lower in proportion to the number of Evening Grosbeaks and Purple Finches than in 1963 and 1965. Red-breasted Nuthatches continue to follow the same pattern of relative abundance in the Carolinas as the northern finches, 176 having been reported in 1968 as compared with 146 in 1963 and 181 in 1965, the last two Christmas counts taken in major finch winters. An average of about 20 individuals appeared on the off-year counts of 1964, 1966, and 1967.

The present count is unusual in that the Golden-crowned Kinglets outnumber the Ruby-crowned better than 3:2. There are 625 Golden-crowns, 142 having been recorded in the Great Smoky Mountains, and only 401 Ruby-crowns. Both species are considerably reduced from their 1967 peak of 733 Golden-crowns and 1,643 Ruby-crowns.

Birds of North Carolina (1959) states that the Catbird is a "regular, but uncommon, winter resident" from Orange and Wake Counties eastward. In tidewater North Carolina and Virginia the breeding and wintering ranges of this species overlap to a greater extent than anywhere else, according to the range map in *Birds of North America* (Robbins et al., 1966). Therefore it is interesting, but not particularly surprising, to note that in the four Bodie-Pea Island Christmas counts (1965-1968) this locality emerges as a winter population center for the Catbird. Ten of the 34 Catbirds sighted in the Carolinas in 1965 were in that count area, 53 of 112 in 1966, 46 of 87 in 1967, and 88 of 113 in 1968.

Another species that may be far more abundant in the coastal plain of the Carolinas than generally suspected is the Yellow-breasted Chat. The tendency has been to dismiss the presence of chats in winter as the lingering of a few feeder-dependent individuals lacking the vitality to migrate. However, the return of a banded Yellow-breasted Chat to Fayetteville, N.C., for three consecutive winters (Hauser, *Chat*, 31:26) indicates wintering individuals of this species may be just as healthy as the ones that migrate normally. In 1968 chats appeared at five localities during the count period: Bodie-Pea Island, New Bern, and Wayne County, N.C., and Dillon and Hilton Head Island, S.C. At Bodie-Pea Island and Dillon the birds did not seem to be feeder dependent. The Dillon compiler mentioned that the bird was feeding on berries, and there are no known feeders in the Bodie-Pea Island count area.

The total number of species for the 1968 Christmas count is 194, the lowest since 1964 when only 190 were recorded. The total number of individuals (202,496) is also rather low. No doubt both figures would be considerably higher if reports had come from Morehead City, N.C., and Charleston, S.C., both of which have habitat to attract rare birds and observers capable of identi-

fying them. While the present count lists only one extremely rare bird, it does reflect generally good coverage in almost all the count areas. The basic purposes of the Christmas counts are to show winter ranges for the various species and to indicate their relative abundance, both geographically and annually. Thus evaluated, the 1968 count in the Carolinas must be considered successful and well above average in ornithological value.

COAST

BODIE-PEA ISLAND, N.C. (center: 2.7 miles SSE of Bodie Island lighthouse, to include southern tip of Bodie Island, northern half of Pea Island National Wildlife Refuge, Wanchese section of Roanoke Island).

31 December; 6:15 AM to 5:00 PM.

Weather: cloudy, light intermittent rain (.07 inches) until 9 AM; temp. 38-59 F; wind SSW, 5-12 mph.

Fifteen observers in 7 parties. Total party-hours, 69.5, total party-miles, 229.

Total species, 131; total individuals, 37,831.

COMMENTS: A dark phase *Parasitic Jaeger* (JHH, PWS) was carefully studied for several minutes with 7X35 binoculars as it pursued a Laughing Gull. The jaeger and the gull were about the same size. The white shafts of the outer primaries and the short central tail feathers were seen clearly. The *Lesser Black-backed Gull* (MMB) was seen for about 20 minutes with 9X35 binoculars as it sat on the beach in a small flock of Herring, Ring-billed, and Great Black-backed Gulls. Browne studied the bird at 90 to 100 feet before checking it out at closer range. Approaching while hidden by a low sand ridge, he was finally able to get within 35 feet before the birds flew. The bird was slightly smaller than a Herring Gull. It had a black back and mantle and yellowish legs. Even though the sky was overcast the yellowish legs were readily apparent. This is the first record of *Larus fuscus* for North Carolina and is probably the southernmost record on the Atlantic coast.

OBSERVERS: Mike M. Browne, Jay H. Carter, Henry Haberyan, James H. Hunt, Edmund K. LeGrand, Harry E. LeGrand Jr., Dale M. Lewis, Vincent J. Mrazek, Richard H. Peake Jr., Jack and Eloise Potter, William C. Russell, Paul W. Sykes Jr., Philip H. Warren, Ray L. Winstead.—Paul W. Sykes Jr., P.O. Box 2077, Delray Beach, Florida 33444

WILMINGTON, N.C. (center: Mrytle Grove Junction).

28 December; 5:00 AM to 6:00 PM.

Weather: heavy rain and strong wind in morning; clearing and windy in afternoon; temp. 55 to 68 F; wind SSW, 15-27 mph with gusts up to 40 mph.

Nineteen observers in 7 parties. Total party-hours, 69, total party-miles, 376.

Total species, 147; total individuals, 16,409.

COMMENTS: *Wilson's Plover* (DP) was at Wrightsville Beach. *Whimbrel* (DB, DP) on Wrightsville Causeway had been present since 16 December (DE). *Gull-billed Tern* (DB) was at Wrightsville Beach. *Black-and-white Warbler* and *Yellow-throated Warbler* were at Orton Plantation (EA).

OBSERVERS: Edna Appleberry, David Barnes, Jay Carter, Dot Earle, Betty Everson, John Fussell, Bill Greene, Adron Hall, Kitty Kosh, Harry Latimer III, Edmund LeGrand, Harry LeGrand, Polly Mebane, Frances Needham, James Parnell, Doug Pratt, Alice Roe, Bill Roe, Tommy Wade.—Dot Earle, 428 Causeway Drive, Wilmington, N. C. 28401

HILTON HEAD ISLAND, S.C. (center: Hilton Head Island Post Office).

28 December; 6:45 AM to 6:30 PM.

Weather: wind, rain, heavy clouds until 11:30 AM; sunny and warm in afternoon; temp. 62-75 F; wind S, 15-30 mph.

Forty-two observers in 11 parties. Total party-hours, 94, total party-miles, 434.

Total species, 144; total individuals, 18,593.

COMMENTS: *Broad-winged Hawk* (EOM, Harralls) circled about 100 feet overhead in sunlight. Shape and wide white tail bands seen distinctly. *Eastern Wood Pewee* (Mrs. EOM, Mrs. HL) was heard in same area during count period. *Baltimore Oriole* (EOM, Harralls) was seen by several others at feeders during count period. *White-crowned Sparrow* (Hacks) was an adult.

OBSERVERS: Mr. and Mrs. W.H. Branch, Hugh Bradley, Nancy Butler, Dr. and Mrs. Maurice Charnock, Grace Goode, Mr. and Mrs. Orion Hack, Mr. and Mrs. David Harrall, Mrs. Alva Hines, Dorothy Hitchcock, Mr. and Mrs. Royce Hough, Arline Jones, Betty Kaufman, Nancy Kaufman, Sanford Komito, Edward Komito, Mr. and Mrs. Henry Lawrence, Mr. and Mrs. E.E. Lorient, Violet McIntosh, Mr. and Mrs. E.O. Mellinger, Caroline Newhall, Helene Parry, Mr. and Mrs. Howard Phillips, Mr. and Mrs. Janvier Rice, Mr. and Mrs. Stuart Roesler, Mr. and Mrs. Sandy Siler, Col. and Mrs. Stanley Whitmore, Mr. and Mrs. Robert Whitney, Alice Woodring.—Mrs. David Harrall, 15 Plantation Drive, Hilton Head Island, S.C. 29928

COASTAL PLAIN

BEAUFORT COUNTY, N.C. (center: where Upper Goose Creek enters Pamlico River in central Beaufort County, including both sides of the river from Bath to Washington).

31 December; 7:00 AM to 5:15 PM.

Weather: light drizzle to heavy rain all day; fog thick on river most of day; temp. 36-58 F; wind SE-SW, 0-5 mph, variable, mostly calm.

Eight observers in 3 parties. Total party-hours, 25, total party-miles, 107.

Total species, 78; total individuals, 5,754.

COMMENTS: *Rough-legged Hawk* (GC) was in light phase. *Pine Siskins* (MMcL, LS) represent our first record since 1937. Whistling Swans were heard on count day but could not be seen because of thick fog. A flock of about 100 has been around recently.

OBSERVERS: Mary Emily Brown, Geraldine Cox, A.O. Edington, James McLaurin, Mary McLaurin, Louise Satterthwaite, Ellis Turnage, Marvin Turnage.—Geraldine Cox, Route 1, Box 115, Merritt, N.C. 28556

PAMLICO COUNTY, N.C. (center: in Florence at intersection of 1324 and 1329).

29 December; 7:00 AM to 5:30 PM.

Weather: fair and very windy; temp. 38-50 F; wind WNW, 5-20 mph.

Three observers in 1 party, plus 1 individual working own yard. Total party-hours, 10; total party-miles, 84.

Total species, 62; total individuals, 2,372.

OBSERVERS: Geraldine Cox, Ellis Turnage, Marvin Turnage.—Geraldine Cox, Route 1, Box 115, Merritt, N.C. 28556

NEW BERN, N.C. (center: New Bern Airport).

29 December; 6:45 AM to 5:30 PM.

Weather: clear; temp 43-56 F; wind WNW, 10-21 mph.

Six observers in 4 parties, plus 3 individuals working own yards. Total party-hours, 20; total party-miles, 130.

Total species, 90; total individuals, 5,943.

COMMENTS: The *Yellow-breasted Chat* (JAM, SM) was carefully identified at close range.

OBSERVERS: Edna Appleberry, Joel Clark, Joretta Clark, Fred Conderman, Margaret Conderman, Robert Holmes, J. Alex Meadows, Sue Meadows, Sam Sweeny.—Dr. Robert P. Holmes, Route 3, Box 95-A, New Bern, N.C.

WAYNE COUNTY, N.C. (center: Indian Springs to include Seven Springs, Mt. Olive, Cliffs of Neuse State Park).

31 December; 7:00 AM to 5:00 PM.

Weather: cloudy with occasional rain; temp. 35-45 F; wind variable, 5-12 mph. Five observers in 1 party, plus 3 individuals working own yards. Total party-hours, 10; total party-miles, 89.

Total species, 65; total individuals, 1,435.

COMMENTS: *Yellow-breasted Chat* (MW) was at feeder (not on count day). Female *Common Merganser* (SS, BD, JB, RK, SK) was on Walnut Creek Lake.

OBSERVERS: Joyce Bennett, Betty Davis, Margaret Davis, Ruth Kemp, Skipper Kemp, Jean Siler, Sandy Siler, Margaret Walker.—R.H. (Sandy) Siler, Route 2, Box 250 D, Dudley, N.C. 28333

DILLON, S.C. (center: Dillon).

31 December; 9:30 AM to 5:15 PM.

Weather: overcast with occasional light rain; temp. 42-50 F; wind N, 2-5 mph. Two observers in 1 party. Total party-hours, 7; total party-miles, 15.

Total species, 35; total individuals, 380.

COMMENTS: *Yellow-breasted Chat* was in wood edge eating berries. *Black-and-white Warbler* was circling several cypress trees in a swamp.

OBSERVERS: J.H. Wilson, Johnny Wilson.—John H. Wilson, Box 535, Dillon, S.C.

COLUMBIA, S.C. (center: intersection of Gills Creek and Bluff Road).

20 January; 7:00 AM to 5:00 PM.

Weather: clear; temp. 41-62 F; wind SW, 2-12 mph.

Six observers in 2 parties. Total party-hours, 18; total party-miles, 140.

Total species, 68; total individuals, 14,493.

OBSERVERS: Gilbert J. Bristow, Miriam Davis, Annie R. Faver, Clare M. McCall, Robert Overing, Kay Sisson.—Gilbert J. Bristow, 2921 Blossom Street, Columbia, S.C. 29205

AIKEN, S.C. (center: Coughton).

26 December; 5:30 AM to 5:30 PM.

Weather: clear; temp. 22-57 F; wind variable, 0-7 mph.

Two observers in 1 party, plus 2 individuals working own yards. Total party-hours, 22; total party-miles, 52.

Total species, 74; total individuals, 7,617.

OBSERVERS: Mrs. W.P. Bebbington, Joyce Braun, Cynthia Post, William Post.—William Post, 1719 Nottingham Road, Raleigh, N.C. 27607

PIEDMONT

HENDERSON, VANCE CO., N.C. (center: Henderson).

21 December; 7:30 AM to 4:00 PM.

Weather: cold in morning; temp. 28-45 F; wind 7-10 mph.

Nine observers in 2 parties, plus 1 individual working own yard. Total party-hours, 8.5; total party-miles, 56.

Total species, 48; total individuals, 1,798.

OBSERVERS: Miss Neita Allen, Mr. and Mrs. A.W. Bachman, Miss Annie Gray Burroughs, Miss Mary Frances Chavasse, James P.B. Connell, Mrs. Walter Dallas, Dr. and Mrs. Paul Stewart, Mrs. Robert Weathersbee.—A.W. Bachman, Henderson, N.C.

RALEIGH, N.C. (center: N&S RR crossing and Lake Wheeler Road).

21 December; 6:30 AM to 5:30 PM.

Weather: clear to partially hazy; ground bare; water open except ice on edge of ponds; temp. 31-52 F; wind NW, 5 mph.

Fifty-five observers in 12 parties. Total party-hours, 87.5; total party-miles, 374. Total species, 96; total individuals, 14,042.

COMMENTS: *Osprey* (JC) was in area of NCSU Farm No. 2 off Reedy Creek Road. The bird flew directly overhead at about 250 feet. *Pileated Woodpecker* (RJH) was in bottomland area where Swift Creek enters Lake Benson. *Least Sandpipers* and *Spotted Sandpiper* (MB, WP) were observed closely with 30X and 20X scopes. All field marks checked. *Green Heron* (DLW) was in swampy bottomland at head of Lake Raleigh. It acted as if somewhat disabled. Four female *Common Mergansers* (EL, HL) were at Lake Johnson. An extremely large flock of about 47 *Fish Crows* (EL, HL) was seen around Lake Raleigh. The distinctive nasal call was heard constantly as the birds soared in close formation above the lake. The total of 96 species is a record count for the Christmas Census.

OBSERVERS: Mr. and Mrs. Don Bates, Mrs. Frank Brant, Mike Browne, Mr. and Mrs. Charles Bryan, Mrs. David Cates, Mr. and Mrs. J.W. Chalfant, Parker Chesson, John Coffey, Caroline Coffey, Nelson Coffey, Mrs. Douglas Cooper, Mr. and Mrs. James Cox, Harry T. Davis, Charlotte Hilton Green, J.F. Greene, R.J. Hader, Dr. and Mrs. W.H. Hatheway, Arnold Hoffman, Esther Ivey, Frank Ivey, Fred Johns, Mabel Jones, Mr. and Mrs. John Lamson, Joshua Lee, Edmund LeGrand, Harry LeGrand Jr., Dale Lewis, Chris Marsh, Edna Miller, Mabel Miller, Darryl Moffett, Mr. and Mrs. William Post, Dr. and Mrs. T.L. Quay, Walker Rayburn, Suzanne Schuhmann, Mary Showalter, Mrs. A.J. Skaale, Mrs. Ben Smith, Mrs. William Sprunt, Gwenn Turbiville, Bert van der Vaart, Joyce Ward, Mrs. Thomas Wilson, Mr. and Mrs. E.W. Winkler, Dr. and Mrs. D.L. Wray.—D.L. Wray, 510 Dixie Trail, Raleigh, N.C. 27607

DURHAM, N.C. (center: 1 mile N and 1 mile E of junction of Eno River and US 501).

21 December; 1:00 AM to 7:00 PM.

Weather: clear to partly cloudy; skim ice on shallow waters; temp. 31-52 F; wind light.

Eight observers in 5 parties. Total party-hours, 41; total party-miles, 187.

Total species, 64; total individuals, 2,373.

OBSERVERS: Norman Budnitz, Frank Enders, Dennis L. McDonald, George Millikan, Anne Payne, Richard Peterson, Ronald Pulliam, Peter Scott.—Frank Enders, 707½ Belvin Avenue, Durham, N.C., and Ronald Pulliam

CHAPEL HILL, N.C. (center: intersection of Columbia and Franklin Streets). 22 December; 6:00 AM to 5:00 PM.

Weather: light rain; temp. 37-39 F; wind NE, 5 mph.

Eight observers in 4 parties, plus 8 individuals working own yards. Total party-hours, 28; total party-miles, 76.

Total species, 63; total individuals, 5,110.

OBSERVERS: David Barnes, Dale Beers, Louise Crumpacker, Bill Dye, Susan and Ashby Fristoe, Gerald MacCarthy, Wallace Patterson, Johnnie Payne, James Pullman, Robert Sharpe, Mark Simpson, M.L. Taliaferro, Robert and Elizabeth Teulings, Josephine Weedon.—Teulings, Route 2, Chapel Hill, N.C. 27514

GREENSBORO, N.C. (center: Lawndale and Liberty Drive).

1 January; 7:00 AM to 5:00 PM.

Weather: clear, cold, and windy; temp. 23-34 F; wind W,NW, 15-20 mph.

Eighteen observers in 8 parties, plus 9 individuals working own yards. Total party-hours, 64.5; total party-miles, 309.

Total species, 74; total individuals, 12,552.

OBSERVERS: Dr. and Mrs. Donald F. Allen, Mrs. David A. Cason Jr., Inez Coldwell, Larry Crawford, Mrs. F.H. Craft, Charlotte Dawley, Mr. and Mrs. G.W. Daniels, Mrs. Jean F. Gertz, Herbert Hendrickson, Mrs. Clarence Knight, Mrs.

B.S. Lambeth Jr., James Mattocks, Ida Mitchell, Mrs. Gilbert Norcross, Elizabeth Ogburn, Mrs. David Parsons, Etta Schiffman, Mrs. Wm. D. Seawell, George Smith, Mrs. W.F. Smyre, Thomas Street, Mrs. Darl Tipton, Mrs. Ralph Weisner, David White, Helen Zuk.—Charlotte Dawley, 114 S. Mendenhall Street, Greensboro, N.C. 27403

WINSTON-SALEM, N.C. (center: intersection of I 40 and Silas Creek Pkwy).

29 December; 5:45 AM to 6:00 PM.

Weather: sunny; temp. 28-51 F; wind W-SW, 3-8 mph.

Twenty-three observers in 8 parties, plus 3 individuals working own yards. Total party-hours, 70; total party-miles, 325.

Total species, 77; total individuals, 12,069.

COMMENTS: Note the large number of *Canada Geese* (794) and *White-crowned Sparrows* (49).

OBSERVERS: Grace Cole, Yel Cowherd, Jess Craven, John Davis, Velma Davis, Gary Gidley, Margaret Gidley, Fred Hill, Ruth Hill, Royce Hough, Dwight Lee, Pollyanna Lee, Sue Moore, Joe Pearson, Temple Pearson, Ann Pollard, Jackie Shelton, Ramona Snavelly, C. Sommer, Becky Spinks, Edie Spinks, Edward Thompson, Jane Whiteman.—C. Royce Hough III, 532 Walter Court, Winston-Salem, N.C. 27103

STANLY COUNTY, N.C. (center: 2 miles NW of Badin).

4 January; 7:00 AM to 5:30 PM.

Weather: high overcast; temp. 25-36 F; wind up to 10 mph.

Twenty-eight observers in 11 parties, plus 25 individuals working own yards.

Total party-hours, 101; total party-miles, 267.

Total species, 77; total individuals, 12,631.

COMMENTS: *Peregrine Falcon* (BC, HM) was studied carefully. A huge *blackbird roost* in Albemarle is estimated to contain 80,000 to 100,000 birds, mostly Starlings (about 90%). *Baltimore Orioles* still increasing, but only at Albemarle.

OBSERVERS: Roy Blalock, Erin Blalock, Margaret Crawley, Barrett Crook, Vera Crook, George Culp, Myrtle Culp, Pauline Culp, Nina Eudy, Joe Ferebee, Virginia Foglio, Mattie Gereg, Rudolph Gereg, Henry Goforth, Naoma Goforth, Mary E. Goforth, Edward Harris, Gertruda Hartung, Louis Hartung, Lectie Harwood, Anne Hatley, Bill Hatley, Claude Hinson, Nell Hinson, Frances Hinson, Bobbie Hutchins, Maurice Hutchins, Maxine Isenhour, Myrtle Isenhour, Ruth Kearns, Annie Ruth Kelly, Vera Littleton, Cindy Lowder, Fisher Maner, Wilmetta Maner, Susan Manly, Doris Mauney, James Mauney, Annie Misenheimer, Paine Misenheimer, Walter Misenheimer, Bessie Morgan, Heath Morgan, Harold Morris, Boyd Newsome, Anne Olsen, Louise Rice, H.L. Rush, Nina Sweacker, Addie Thompson, John U. Whitlock, Vivian Whitlock, Bennie Winget.—Mrs. John U. Whitlock, Box 99, Albemarle, N.C., and Mrs. Barrett Crook, New London, N.C.

CHARLOTTE, N.C. (center: intersection of US 21 and Woodlawn Road to include a small part of York County, S.C.).

28 December; 7:30 AM to 5:00 PM.

Weather: heavy rain at daybreak, clearing in early morning and clear rest of day; temp. 39-60 F; wind SW, 11-41 mph.

Fourteen observers in 6 parties, plus 1 individual working own yard. Total party-hours, 39.5; total party-miles, 225.

Total species, 64; total individuals, 13,937.

COMMENTS: Early morning downpour and high winds the balance of the day kept the birds and the count down. Count center shifted SW from that used for previous Christmas Counts for past 25 years; this is same area used for spring count last several years. An estimated 8,050 Starlings were seen in one flock, but no roost was discovered (JPH et al.).

OBSERVERS: Jimmy Bookout, Mrs. Edwin O. Clarkson, Mrs. W.G. Cobey, Mr. and Mrs. A.H. Dykema, J.P. Hamilton, Bowman Kelly, W.B. Mayer, J.R. Norwood, Mrs. J.R. Norwood, Tommy Rhyne, Mr. and Mrs. Shuford K. Peeler, Mrs. George C. Potter, William Smith (Mecklenburg Audubon Club, guests).—Joseph R. Norwood, 1329 Goodwin Avenue, Charlotte, N.C. 28205

GREENVILLE, S.C. (center: intersection Hwy 29 and 291).

1 January; 7:30 AM to 5:30 PM.

Weather: fair and cold; temp. 24-35 F; wind 5 mph.

Six observers in 2 parties, plus 4 individuals working own yards. Total party-hours, 10; total party-miles, 35.

Total species, 49; total individuals, 913.

OBSERVERS: Ruth Gilreath, Gladys Hart, Lillie Hart, Rosa Lee Hart, P.M. Jeness, Mamie Kanaley, Martha Lawrence, May Puett, Lee Watson, Richard Watson.—Rosa Lee Hart, Route 1, Travelers Rest, S.C. 29690

PIEDMONT, S.C. (center: intersection of Hwy 8 and I 85).

24 December; 6:00 AM to 4:00 PM.

Weather: cold and very windy; sunny; temp. 28-49 F; wind N-NW, 5-15 mph.

Four observers in 1 party. Total party-hours, 10; total party-miles, 128.

Total species, 55; total individuals, 2,188.

COMMENTS: The *Pine Siskins* (RCT, ADT, CRG) were the first seen in the area in 5 years. There was a general shortage of all birds this year, possibly due to the cold wind. The local lakes were high, causing a general shortage of waterfowl.

OBSERVERS: Michael S. Anderson, Carl R. Garrison, Adair M. Tedards, R. Connor Tedards.—Carl R. Garrison, RFD 4, Box 228, Easley, S.C. 29640

ANDERSON COUNTY, S.C. (center: Anderson Airport).

27 December; 6:45 AM to 5:30 PM.

Weather: partly cloudy, light rain noon and late afternoon; temp. 29-45 F; calm.

Nine observers in 4 parties. Total party-hours, 26.5; total party-miles, 300.

Total species, 70; total individuals, 7,064.

COMMENTS: The *Barred Owl* (AT, CW) was seen at 3:00 PM perched on a speed limit sign on a rather heavily traveled road. Observers approached within 4 feet before the bird, apparently uninjured, flew a few feet to a pine tree.

OBSERVERS: Carl Garrison, Carol Nichols, Karl Nichols, Pam Spencer, Adair Tedards, Connor Tedards, Douglas Tedards, Judith Tedards, Caroline Watson.—Adair Tedards, 207 Brown Road, Anderson, S.C. 29621

ELKIN-RONDA, N.C. (center: 2 miles N of Elkin on US 21).

26 December; 8:00 AM to 4:00 PM.

Weather: fair; temp. 20-32 F; wind W, 5-10 mph.

Six observers in 2 parties, plus 2 individuals working own yards. Total party-hours, 42; total party-miles, 47.

Total species, 51; total individuals, 2,501.

COMMENTS: *Redhead* (EMH, WPS, JT) is unusual in area.

OBSERVERS: T.R. Bryan, Ola Hendren, Tom Hendren, E.M. Hodel, Fred Mastin Jr., L.H. Petree, W.P. Smith, Jerry Tysinger.—Lin Hendren, Box 148, Elkin, N.C. 28621

NORTH WILKESBORO, N.C. (center: airport).

21 December; 6:45 AM to 5:45 PM.

Weather: clear with increasing cloudiness in afternoon; temp. 32-54 F; wind SW, 0-10 mph.

One observer. Total party-hours, 9; total party-miles, 29.

Total species, 34; total individuals, 634.

—Wendell P. Smith, 911 E Street, North Wilkesboro, N.C.

LENOIR, N.C. (center: Lenoir).

28 December; 8:00 AM to 5:00 PM.

Weather, rainy, chilly; temp. about 45-55 F; wind NW, 15-20 mph.

Nine observers in 3 parties, plus 3 individuals working own yards. Total party-hours, 34; total party-miles, 45.

Total species, 37; total individuals, 949.

OBSERVERS: Nancy Alexander, Edna Bruner, Margaret Harper, Mr. and Mrs. E.M. Manchester, Mr. and Mrs. Fred May, Helen Myers, Thomas Parks, R.N. Styres, Mrs. C.S. Warren, Anne Wilcox, Miss George Wilcox.—Miss Helen Myers, 310 Beall Street, Lenoir, N.C. 28645

MOUNTAINS

SWANNANOA, BUNCOMBE CO., N.C. (center: 300 Wilson Avenue).

1 January; 7:30 AM to 5:00 PM.

Weather: clear; temp. 14-29 F; wind W, 10-15 mph with gusts to 35 mph.

One observer in 1 party, plus 1 individual working own yard. Total party-hours, 12.5, total party-miles, 100.5.

Total species, 23; total individuals, 645.

OBSERVERS: Betty M. Ruiz, Robert C. Ruiz.—R.C. Ruiz, 300 Wilson Avenue, Swannanoa, N.C. 28778

GREAT SMOKY MOUNTAINS NATIONAL PARK, N.C.-TENN. (center: Bull-head, to include Gatlinburg).

22 December; 7:00 AM to 6:00 PM.

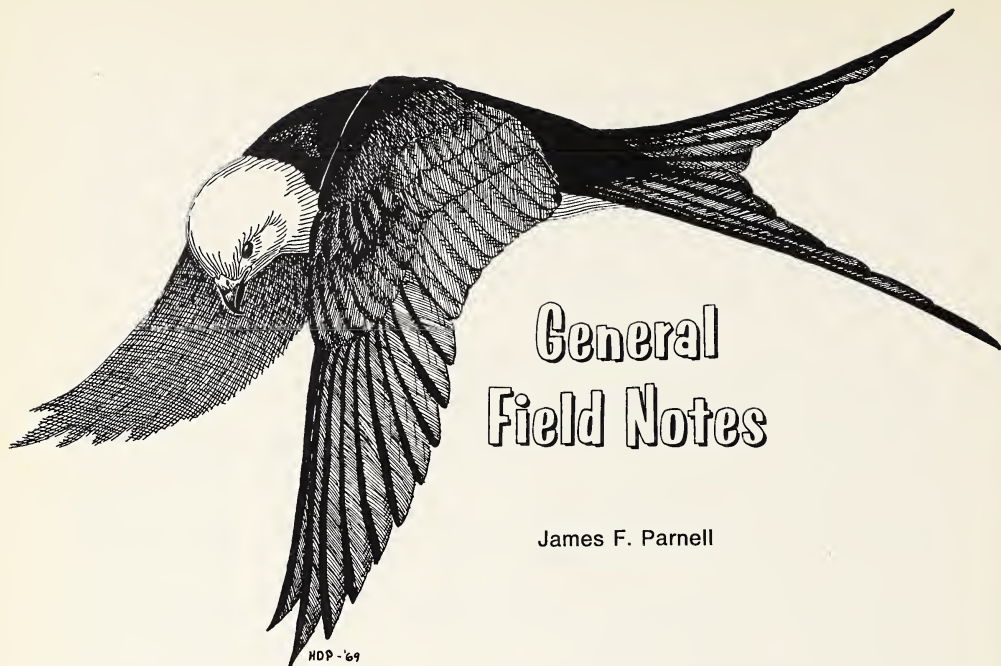
Weather: overcast with rain all day, .40 inches lower elevations, 1.58 inches higher elevations; temp. 34-55 F; wind variable, 5-30 mph with gusts up to 40 mph.

Twenty-two observers in 10 parties. Total party-hours, 71; total party-miles, 302.

Total species, 58; total individuals, 2,277.

COMMENTS: *Blue Goose* (AS, JC, MG) has been observed in Gatlinburg since October 1967. It is a healthy bird, capable of flight, but it seems to be enjoying its association with domestic ducks in the river that flows through town. It has made no attempt to leave since its arrival shortly after a migration casualty of 500 birds near Gatlinburg Ski Resort in early October 1967. *Short-billed Marsh Wren* (MG) is the first report of this species on our Christmas Count. The area was later examined by two knowledgeable members of the count team who reported the habitat as being suitable for the species. *Henslow's Sparrow* (JCH) is the first report of this species on our Christmas Count.

OBSERVERS: Gilbert Banner, Joshua Banner, James Campbell, Robert J. Dunbar, Danny Ellis, Mary Enloe, Maurice E. Grigsby, Gale Hobbs, Joseph C. Howell, Susan Hoyle, Mrs. George McGown, Mr. and Mrs. Robert A. Monroe, Louise Nunnally, Holly Overton, Stephen Satterfield, Terry Satterfield, A. Boyd Sharp Jr., Ed Smith, Mr. and Mrs. Arthur Stupka, Richard C. Zani.—Richard C. Zani, Route 1, Box 10, Gatlinburg, Tennessee 37738



General Field Notes

James F. Parnell

Fall Migration Observations of Shorebirds in Guilford County, N.C.

JAMES MATTOCKS

P.O. Box 462, High Point, N.C.

1 December 1968

Brandt Lake, northwest of Greensboro, in Guilford County, N.C., has been the main water supply for the City of Greensboro in recent years. Since 1966 the combination of heavy water use and unusually dry weather has caused up to 8 feet of drop in the water level in late summer and fall. This created large areas of mud flats which were extensively used by migrating shorebirds. Below is a summary of shorebirds observed at Brandt Lake for 1966, 1967, and 1968.

SEMIPALMATED PLOVER—31 August to 8 October; maximum of 35 on 7 September 1968; present all three years.

PIPING PLOVER—one 25 September to 1 October 1966.

KILLDEER—present at all times; maximum of 80 in October 1968.

AMERICAN GOLDEN PLOVER—14 September to 22 October; maximum of 7 on 7 October 1967; present all three years.

BLACK-BELLIED PLOVER—one 17 September and two 23 October 1966; one 6 September 1968.

RUDDY TURNSTONE—one 17 to 22 September 1966.

COMMON SNIPER—10 September to spring; maximum of 21 on 3 November 1968; present all three years.

UPLAND PLOVER—one 24 and 29 September 1966.

SPOTTED SANDPIPER—24 August to 8 October; maximum of 8 on 31 August 1968; present all three years.

SOLITARY SANDPIPER—24 August to 15 October; maximum of 4 on 26 August 1967 and 31 August 1968; present all three years.

GREATER YELLOWLEGS—26 August to 11 November; maximum of 8 on 9 September 1967 and 23 October 1966; present all three years.
 LESSER YELLOWLEGS—26 August to 11 November; maximum of 18 on 15 September 1968; present all three years.
 PECTORAL SANDPIPER—24 August to 11 November; maximum of 58 on 7 September 1968; present all three years. Beginning on 7 September 1968 and for the next three weeks, some Pectoral Sandpipers were observed with distinctly down curved bills. These birds generally appeared to be larger and darker breasted than most of the Pectorals which had straight bills.
 WHITE-RUMPED SANDPIPER—three 24 September 1966.
 BAIRD'S SANDPIPER—one 24 and 25 September 1966; two 9 September 1967.
 LEAST SANDPIPER—24 August to 11 November; maximum of 28 on 8 September 1968; present all three years.
 DUNLIN—22 October to 11 November; maximum of 16 on 4 November 1967; present all three years.
 DOWITCHER (sp. ?)—24 August to 7 October; maximum of 10 on 2 September 1967; present all three years.
 STILT SANDPIPER—seven 17 and 18 September 1966; present 4 to 28 September 1968, with a maximum of 4.
 SEMIPALMATED SANDPIPER—31 August to 29 October; maximum of 79 on 5 September 1968; present all three years.
 WESTERN SANDPIPER—31 August to 8 October; maximum of 10 on 21 September 1968; present all three years.
 BUFF-BREASTED SANDPIPER—10 September to 2 October 1966, maximum 3.
 SANDERLING—4 to 17 September; maximum of 12; present all three years.
 AMERICAN AVOCET—9 to 11 October 1966, maximum of 13 on 9 October.
 NORTHERN PHALAROPE—one 4 and 5 September 1968.

All of the above species were observed by Mattocks and (with the exception of the Upland Plover) by George Smith. All of the unusual species were carefully studied by many other members of the Piedmont Bird Club of Greensboro and the Catesby Bird Club of High Point.

The completion of a new reservoir in the near future may change the water use pattern of the reservoir system. Thus these flats which have been so productive for the past three years may no longer be suitable for shorebirds.

Willetts Visit Farm Pond in Wake County, N.C.

ELOISE F. POTTER

P.O. Box 277, Zebulon, N.C.

9 September 1968

On 17 August 1967 my son, David, and I carefully studied a Willet as it foraged on a grassy mud flat in the small farm pond adjoining our property near Zebulon, Wake County, N.C. The next day two Willets flushed from the same area. The only previously known record from this vicinity occurred on 13 August 1945 when Ernest Mitchell Jr. found one at Lake Myra in eastern Wake County (*Chat*, 9:76). It is surprising that this species has been found on two relatively small bodies of water while remaining unrecorded from the major reservoirs around Raleigh, which are visited regularly by many capable observers.

The Peregrine Falcon at Mt. Mitchell, N.C.

MARCUS B. SIMPSON JR.

210 Ridgeway Avenue, Statesville, N.C.

23 August 1968

On 14 July 1968, I observed an adult Peregrine Falcon (*Falco peregrinus*) in flight near the Camp Alice Road at Mt. Mitchell State Park, North Carolina. The bird was seen carrying food on several occasions, and it frequently soared

across the valley of Lower Creek and into the dense woods of Grassy Knob Ridge at an elevation of around 6,000 feet. The Park Naturalist later informed me that the bird had been present in this same area for several weeks prior to my observations. This and the frequency of its presence and actions suggested the possibility of nesting.

Peregrine Falcons were first reported in this area by Cairns in 1887 (*The Ornithologist and Oologist*, 12:3-6), who mentions the bird as a rare resident in the Craggy and Black Mountains. Subsequently Cairns in 1894 (unpublished manuscript in the Duke University Library) reported that the Peregrine nested in May and June in these high mountain ranges, but he made no mention of a specific record. Burleigh in 1941 (*Auk*, 58:334-345) did not report the bird during a 5-year study on Mt. Mitchell, but T.W. Simpson in 1957 (*Chat*, 21:89-90) observed a single bird there on 7 June 1957. The only other record, mentioned in a list of the birds of Mt. Mitchell State Park, was the observation of a single bird by D.A. Adams on 18 May 1959.

Prairie Falcon in Carteret County, N.C.

ROBERT P. HOLMES III
New Bern, N.C.

On 23 May 1968, while driving eastward along Hwy 70 about 2 miles E of Sea Level, N.C., I saw a large falcon perched on a light wire about 40 feet off the road. The bird was the size of a Peregrine Falcon but lacked that species' characteristic facial pattern and was a paler brown color. As the bird flew, its black axillary feathers were noted. In light of these characteristics I feel that this bird was a Prairie Falcon (*Falco mexicanus*) and as such represents an addition to the hypothetical list for North Carolina.

[A check of *Birds of North Carolina* and *The Chat* revealed no records of this western species from North Carolina. The Fifth Edition of the *Check-list of North American Birds* lists no record of this species east of the Appalachians. —Dept. Ed.]

Flood Water Destruction of Eastern Phoebe Nests

MARCUS B. SIMPSON JR.
210 Ridgeway Avenue, Statesville, N.C.

19 August 1968

Before the advent of civilization, the Eastern Phoebe (*Sayornis phoebe*) nested primarily around vertical rock cliffs, overhanging ledges, and rocky stream banks. Following the creation of bridges, the phoebe quickly moved its nesting site to take advantage of the shelter and support offered by this innovation; but in so doing it exposed itself to the danger of nest destruction by flooding.

On 18 May 1968 I was exploring portions of the headwaters of the First Broad and South Fork Rivers in Cleveland and Burke Counties, N.C. The absence of the phoebe from this area soon became quite noticeable, and I began checking under the many rural bridges for possible nests. In the course of the day no adult birds were seen, and only one nest was found. This single nest, located about 5 feet above the water underneath a steel and concrete bridge, was quite misshapen and contained the bodies of two well-feathered young. I checked quite a few other bridges, but all of them were so thickly jammed underneath with mud and debris that it was impossible to determine whether any nests had been present. Heavy rains had soaked this region all during the previous week, and the evidence of severe flooding throughout the area was quite noticeable. Apparently all the bridges which I examined had been completely inundated by the high water, and the destruction of the phoebe nests was probably quite extensive.

A Brewster's Warbler in Moore County, N.C.

JAY CARTER

P.O. Box 891, Southern Pines, N.C.

16 October 1968

On 29 August 1968, as I was birding in a swamp along Drowning Creek in extreme southern Moore County, I saw a hybrid of the Blue-winged Warbler (*Vermivora pinus*) and the Golden-winged Warbler (*V. chrysoptera*) that was referable to the Brewster's type. The bird had a bright yellow crown and a black line that extended through the eye to the bill. The back was bluish-gray and the sides were gray. Its breast and belly were clear white, and there were two white wing-bars on each wing. The yellow that is sometimes found on the breast and in the wing-bars of Brewster's Warblers was completely absent on this bird.

The area where the warbler was seen was covered by various oaks, maples, gums, and some pines and hollies. There were frequent tangles of brush and vines also. A logging operation a few months before had left the area crisscrossed with drag lines, and this had opened up the forest considerably.

The bird was seen mostly at medium heights, and it was in the company of several other small birds, including some other species of warblers. The weather for 29 August was mostly fair, with a high of 79 F and a low of 51 F. This was the third day in a cool spell that had broken the record-setting heat wave of late August.

Both Blue-winged and Golden-winged Warblers are considered quite uncommon migrants in the Moore County area, with the Golden-winged much rarer than the Blue-winged. To my knowledge, this is the first record of the Brewster's Warbler in this vicinity. The other hybrid type, Lawrence's Warbler, remains unrecorded.

BRIEFS FOR THE FILES

Compiled by JAMES F. PARNELL
(all dates 1968)

Common Loon, one was found inland at Raleigh, N.C., on 2 November, by Will Post.

Audubon's Shearwater, an apparently injured bird was seen in Masonboro Inlet just south of Wrightsville Beach, N.C., on 20 August by Frances Needham.

Cattle Egret, one was inland at Southern Pines, N.C., on 17, 18, and 24 November, Jay Carter.

Green Heron, one was late along the Neuse River near Raleigh on 15 November, Mike Browne.

Gadwall, a single bird was early at Greensboro, N.C., 31 August, James Mattocks.

Ring-necked Duck, two were early at Southern Pines on 28 August, Jay Carter.

White-winged Scoter, a single bird was seen inland at Raleigh on 15 and 17 November, Thomas L. Quay, Gilbert Grant, and Mike Browne.

Red-breasted Merganser, one was unusually far inland at Raleigh on 23 November, and two were there on 27 November, Robert J. Hader. A single bird was at Southern Pines on 17 November, and two were there on 19 November, Jay Carter.

Osprey, two were late in the interior of North Carolina. One was seen at North Wilkesboro, N.C., on 19 November by Wendell Smith, and one was seen at Raleigh on 17 November by Robert Hader.

Black Rail, one was found on 27 September at Wrightsville Beach by Frances Needham.

American Coot, one seen at Southern Pines on 11 August was early, Jay Carter.

Piping Plover, one was banded at Raleigh on 14 September by Will Post.

American Golden Plover, at Raleigh one was seen on 19 and 21 September, five on 24 September, and four on 28 September by Robert Hader, Mike Browne, and Will Post.

Black-bellied Plover, one was inland at Raleigh on 18 August, Will Post and Frank Enders; and one was seen there 19 through 26 October by Robert Hader, Mike Browne, and Harry LeGrand.

Upland Plover, two were seen at Wrightsville Beach on several occasions between 12 and 29 August by Dorothy Earle.

Pectoral Sandpiper, seen on several dates at Raleigh between 26 July and 18 November, Robert Hader, Mike Browne, and Harry LeGrand.

White-rumped Sandpiper, one was banded by Will Post on 8 September, Raleigh.

Stilt Sandpiper, one or two seen on several occasions at Raleigh between 30 July and 3 October, Robert Hader, Mike Browne, and Will Post.

Western Sandpiper, at Raleigh two were found on 7 September, one on 24 September, and two on 29 October, Robert Hader.

Hudsonian Godwit, two were seen on 10 November at Oregon Inlet in the Cape Hatteras National Seashore by several members of the Montgomery County Chapter of the Maryland Ornithological Society, including Carl W. Carlson and Robert Richman.

Long-billed Curlew, one was seen at Oregon Inlet with the above Hudsonian Godwits and several Marbled Godwits on 10 November, Carl W. Carlson, Kevin T. Mullen, and others.

Sanderling, two were found on 21 and 22 September at Raleigh by Robert Hader, Will Post, and Mike Browne.

Wilson's Phalarope, one was found at the Cape Hatteras National Seashore on 24 August by Maurice V. Barnhill and John Withrow.

Forster's Tern, 10 observed carefully at Greensboro on 11 September by James Mattocks.

Common Tern, five were seen at Raleigh on 13 August, Will Post and Mike Browne.

Caspian Tern, five were seen at Raleigh on 4 September by Robert Hader, while three were found at Greensboro on 7 September by James Mattocks. Two were seen on Lake Gaston on 22 and 23 August by Henry Haberyan.

Ground Dove, two remained at Wrightsville Beach until late December, Dorothy Earle.

Yellow-bellied Sapsucker, a single bird was early at Southern Pines on 16 September, Jay Carter.

Yellow-bellied Flycatcher, one was banded at Raleigh on 5 October by Will Post, Mike Browne, and Dale Lewis. A single bird was also seen at North Wilkesboro on 12 September by Wendell Smith.

Western Kingbird, on 11 November one was seen at the Pea Island National Wildlife Refuge and another near Duck, N.C., by Miss Gene Evans and several other members of the Montgomery County Chapter of the Maryland Ornithological Society.

Great Crested Flycatcher, a single bird seen 5 November at Beaufort, N.C., was very late for North Carolina, Frank L. Chapman.

Olive-sided Flycatcher, three young birds were seen begging for food at North Wilkesboro on 12 September. Single adults were seen on 17 August and 20 September, Wendell Smith.

Horned Lark, one at Bodie Island on 24 August was apparently early for coastal North Carolina, Maurice V. Barnhill and John Withrow.

Tree Swallow, one was very early at North Wilkesboro on 25 July, W.P. Smith.

Cliff Swallows were reported to have nested successfully this summer under the bridges at Lake Gaston, Henry Haberyan.

Red-breasted Nuthatches were found on the early date of 11 September at Cape Hatteras National Seashore, Lee Jones; widespread by mid-October.

Short-billed Marsh Wren, a single bird was found on 28 September at Raleigh by Robert Hader.

Ruby-crowned Kinglet, one was seen early on 8 September in Mecklenburg County, N.C., by Lee Jones.

Philadelphia Vireo, four recorded at Chapel Hill, N.C., during the period from 14 to 17 September by Robert Teulings. One was banded at Winston-Salem, N.C., on 6 October by Fred S. Hill.

Orange-crowned Warbler, one was seen at Raleigh 12 October, Robert Hader; and one was at Southern Pines on 20 October, Jay Carter.

Nashville Warblers were seen in unusually large numbers this fall. At Raleigh Robert Hader found one on 1 October, and Will Post banded one on 10 October. Robert Teulings banded an immature female at Chapel Hill on 12 September, and Fred Hill found individuals at Winston-Salem on 12 and 13 October. Wendell Smith saw one at North Wilkesboro on 8 October.

Cape May Warbler, one was very late at Winston-Salem on 28 November, Fred S. Hill.

Yellow-throated Warbler, one was very late at Raleigh on 27 November, Gilbert Grant.

Mourning Warbler, an immature bird banded on 27 August at Chapel Hill was most unusual, Robert Teulings.

Brewer's Blackbird, a flock of approximately 60 was seen 16 September near Turbeville, S.C., by Bruce Mack.

Wilson's Warbler, one on 15 October at North Wilkesboro, Wendell Smith; one on 12 September and 1 October at Raleigh, Robert Hader.

Red Crossbill, a flock of about 12 was seen on 27 to 29 September by several members of Carolina Bird Club at Blowing Rock, N.C., Robert Teulings.

Henslow's Sparrow, one was found at North Wilkesboro on 14 October by Wendell Smith.

Lincoln's Sparrow, single birds were banded by Robert Teulings near Chapel Hill on 12 and 18 September and 3 November.

CORRECTIONS: The Stilt Sandpiper reported at Chapel Hill on 4 July in the September 1968 issue of *Chat* should have been a Solitary Sandpiper.

In the briefs for March 1968 the Black Tern record at Southern Pines should have referred to 6 birds on 20 August rather than a single bird on 10 September.

In the December 1968 Field Note on the American Golden Plover at Southern Pines, N.C., the editor's comment is in error. There are actually several other spring records of the American Golden Plover in North Carolina.—JFP



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Carolina Bird Club is an incorporated association for the study and conservation of wildlife, particularly birds, chiefly in the Carolinas. Founded in 1937 as the North Carolina Bird Club, it was joined in 1948 by several South Carolina natural history clubs and the name changed to the Carolina Bird Club.

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OUR COVER—Female Evening Grosbeak (Jack Potter).

THE PROTHONOTARY WARBLER IN THE CAROLINA PIEDMONT

MARCUS B. SIMPSON JR.

Until recent years, ornithologists in the Carolinas have traditionally regarded the Prothonotary Warbler (*Protonotaria citrea*) as a bird confined to the wooded swamps and cypress-lined waterways of the coastal plain, with virtually no evidence that this species might regularly be present above the fall line. Sprunt and Chamberlain (1948) give the range in South Carolina as the eastern portion of the state and note that it is infrequently observed in the interior, even during migration. Pearson, Brimley, and Brimley (1959) state that the Prothonotary is confined to the eastern half of North Carolina during the summer months, with inland nesting records as far west as Raleigh, Zebulon, and Chapel Hill. Within the past two decades, however, an increasing volume of observations from inland regions suggests that the ecology and distribution of this species should be subjected to careful scrutiny, with an effort to redefine its status in the piedmont of the Carolinas.

YADKIN-PEE DEE RIVER SYSTEM

The first published observations of the Prothonotary Warbler from the piedmont came when Trott (1951) reported an adult male feeding young on 23 June 1951 along the banks of the Yadkin River near New London, Stanly County, N.C. Trott stated that he had seen the birds at this site during previous summers, but this was the first conclusive evidence of nesting in the area.

However, the Prothonotary Warbler had been recorded along the Yadkin River for some time before Trott's observations were made known. H. Mack Owens (pers. com.) first noted these birds during the breeding season in 1942 near the mouth of Cane Creek on High Rock Lake, Rowan County, N.C.; and he informs me that they have been present there since that time. An even earlier record comes from Roy Blalock (pers. com.) who reports that he has seen these birds for over 50 years along the Yadkin River and in areas of suitable habitat in Stanly, Montgomery, and Richmond Counties, with the birds first being noted about 1917.

In recent years a number of additional observations and nest records have come to light in this area. Vivian Whitlock (pers. com.) reports that the Prothonotary is common on Long Creek just west of Albemarle, particularly in the City Lake area, where the birds have been noted regularly since 1957. Since 1960, she has reported three nests and five singing males in Montgomery County along the Uwharrie River several miles upstream from Lake Tillery. Vera Crook (pers. com.) reports seeing the bird frequently along the shores of Badin Lake, with nests noted in 1965 and 1966. Joseph Norwood (pers. com.) informs me that the Prothonotary is common on Lake Tillery at Morrow Mountain State Park and also at Tuckertown Lake near the N.C. route 49 bridge. In 1966 H. Mack Owens (pers. com.) found three pairs near the pumping station at the confluence of the Yadkin and South Yadkin Rivers. One nest was located, while the other two pairs were observed carrying nest materials and food. Owens also reported that male Prothonotary Warblers had been noted singing during the summer on Second and Third Creeks in Rowan County and at several sites on High Rock Lake. In June 1966 on the Davidson County side of the river, Chris Sawyer (pers. com.) discovered a nest of Prothonotary Warblers in a cove near the town of Southmost.

In May and June 1967 I conducted extensive field work throughout the Yadkin River valley and its tributaries in search for the Prothonotary Warbler. All dates discussed below are from this 1967 field study unless otherwise noted.

I conducted field work at eleven sites along the Yadkin River, and male Prothonotary Warblers were observed at eight of these locations. On 13 June in Forsyth County, I found two males singing along the river banks at Tanglewood Park and a third male in song on an island 2 miles south of the park. Apparently these observations mark the

inland limit of the bird on the Yadkin, for extensive searches at three sites farther upstream revealed no Prothonotary Warblers. After searching along the river around the US 421 bridge, the Forsyth County rural 1525 bridge, and the Yadkin County rural 1001 bridge, I concluded that the bird was not present north of the Tanglewood Park area. Although Lin Hendren (pers. com.) reported an adult male in song on the Yadkin River about 6 miles west of Elkin in April 1962, he informs me that the bird was apparently a migrant. On 21 June in Rowan County, I noted two males in song at the confluence of the Yadkin and South Yadkin Rivers; one male was heard singing near Cane Creek Cove on High Rock Lake; and two males were seen at the I-85 bridge. Farther down the river, males were in song on the same date at the bridges on NC route 49 in Rowan County, NC route 73 in Stanly County, and NC route 109 in Anson County.

Originating in southeastern Iredell County, Rocky River flows through Cabarrus, Stanly, Union, and Anson Counties and into the Pee Dee River several miles northeast of Ansonville. I conducted field work at seven sites on Rocky River and also on Richardson and Clarke Creeks, two of its larger tributaries; and Prothonotary Warblers were noted at all locations. In Cabarrus County near the confluence of Rocky River and Clarke Creek, three occupied nests were located on 29 May, the birds first being noted on 9 May. Also on Rocky River in Cabarrus County, males were singing on 8 and 9 May at rural routes 1449 and 1445, while three males were in song at these sites on 30 May. On 21 June at the Rocky River bridges in Stanly County, one nest was found at rural 1934 and two males were singing at rural 1943. On Richardson Creek in Anson County, two singing males and one nest were noted at rural route 1606, while two males were in song at rural route 1600.

The South Yadkin River originates in the Brushy Mountains of Alexander and Iredell Counties and flows through Davie and Rowan Counties before joining the Yadkin several miles north of Salisbury. Prothonotary Warblers were noted at five sites along this drainage basin, although only one nest was located. On 8 June in Davie County, one male was in song at the confluence of Bear Creek and the South Yadkin River, while five males were singing along a 1 mile stretch of Hunting Creek. On 6 June, males were in song on the Hunting Creek bridges at rural routes 1153 and 1142. In May 1964 Ron Underwood (pers. com.) discovered a pair of Prothonotary Warblers near the US route 21 bridge in Iredell County, and subsequent investigations confirmed the nesting. Apparently the bird does not range any farther up the South Yadkin than this area, for I have spent many years birding along this river farther west without finding breeding Prothonotary Warblers there.

In Montgomery and Richmond Counties, males were noted on 21 June near Town Creek Indian Mound along Little River; and in Mecklenburg County, a pair was present through May and June 1966 on the Davidson College Pond. Royce Hough (pers. com.) reported Prothonotary Warblers on Salem Creek in Forsyth County, and on 13 June I found one male singing at this site. In Davie County, I noted males in song on Dutchman's Creek at two sites just east of Mocksville on 6 June.

CATAWBA-WATEREE RIVER SYSTEM

In the Catawba system the first evidence of nesting by the Prothonotary Warbler came when Norwood (1961) reported the discovery of a nest on 14 May 1961 on Lake Wylie, Mecklenburg County, N.C. During the previous summer Frank Ramsey had noticed adults carrying food at the same site and in May 1963 I visited the area and found an adult male in song. However, Mrs. W.S. Robinson (pers. com.) discovered a nest on the Carlisle White Lake near Chester, S.C., in 1957; and she informs me that the pair successfully reared the brood. At Landsford on the Catawaba River, Mrs. D.A. Lacross (pers. com.) discovered a pair of Prothonotary Warblers in May 1966 and subsequently observed them feeding young. In 1967 the birds were also present there, although no search for a nest was made.

Due to time limitations and the apparent lack of suitable habitat, my field work in

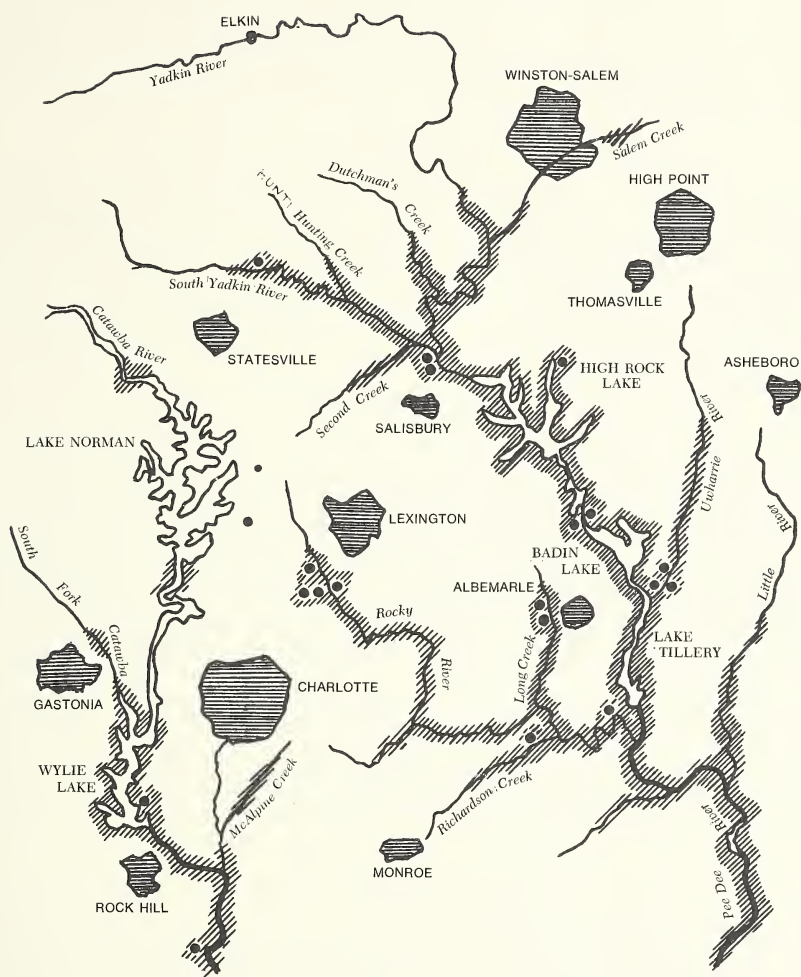


Figure 1. Range of Prothonotary Warbler in Yadkin and Catawba river systems.

the Catawba River system was not as extensive as that in the Yadkin basin. On a number of visits to the upper Wateree River swamp in Sumter County, S.C., I noted the Prothonotary Warbler to be among the most abundant birds in the area. In North Carolina, I found a male in song on 24 June at McAlpine Creek in Mecklenburg County, while two males were noted on the South Fork River near Cramerton, Gaston County in May 1968. The only other observation of the Prothonotary from the Catawba came in May 1964, when I found two males singing near the I-40 bridge at the northern extremity of Lake Norman. Although I have birded on Lookout Shoals Lake for many years, the Prothonotary has never been seen there during the breeding season; and Fred May (pers. com.) informs me that he knows of no records from Lake Hickory or Lake James. The bird appears to be absent from most of Lake Norman due to the lack of suitable habitat except at the I-40 area.

WESTERN SOUTH CAROLINA

Although I have done no field work in this area, two pertinent observations have been published by others. Shuler (1966) reports that John Watkins found a pair of Prothonotary Warblers inspecting nest cavities in 1963 on a farm pond in Cherokee County. Mrs. R.C. Tedards (pers. com.) discovered the birds on Rocky River near Anderson during the summer of 1961 and since that time she has also located the species on Twenty-three Mile Creek. Then on 23 May 1966, a nest containing five eggs was discovered in the Rocky River Swamp by Tedards (1968), climaxing three summers of careful searching in the area.

ECOLOGICAL NOTES

My studies in the Yadkin River system revealed that the Prothonotary Warbler is strictly limited to thick deciduous woods bordering large streams, rivers, and lakes. The birds are distributed in a linear fashion along the water's edge, with the singing males consistently spaced from 800 to 1,000 feet apart. The birds are absent from waterways where the woody border is less than 100 feet deep, although the birds will tolerate sites where one bank is completely cut over so long as the opposite side has a sufficiently deep woodland edge. Nests are placed almost exclusively in stumps and snags, usually standing in water or within 2 feet of it, and at heights from 2.5 to 11 feet.

The highest elevation at which the birds were noted during the nesting season occurs at the Davidson College Pond and also at the I-40 bridge at Lake Norman, both sites measuring approximately 800 feet above sea level. In the Yadkin River basin, elevations vary from 190 feet at the confluence of Rocky River and the Pee Dee River up to about 650 feet near Tanglewood, while the three nests located at the confluence of Clarke Creek and Rocky River were situated at an elevation of 600 feet.

The range map (Figure 1) summarizes the above distributional data from the Yadkin and the Catawba River systems.

DISCUSSION

The major question raised by these records is that of range expansion. In order to deduce that a bird has expanded its range to include formerly unoccupied territory, two facts must be established: 1) the species now occurs in a given site where it has not been previously recorded, and 2) competent observers worked exactly the same area in previous years and failed to find the birds at that particular site. I include the word "exactly" because many species, such as the Prothonotary Warbler, are so localized and specialized in their habitat requirements that they may go unnoticed for years in a particular area.

A superficial examination of the data from North Carolina leads to the conclusion that this bird has recently invaded the piedmont and is increasing in numbers throughout the area. Advocates of this view point out that a similar event has taken place in a

number of states, and they cite the recent impoundment of rivers to form large reservoirs as the major ecological change causing this inland movement. However, a careful examination of the data reveals that this claim can be substantiated in only a few areas. It is a well documented fact that the Prothonotary Warbler has spread across Oklahoma following the creation of dams on its major rivers. George M. Sutton (pers. com.) informs me that the bird was absent from most of Oklahoma until the impoundment of its waters created sizable areas of suitable habitat. Following the building of these dams, extensive tracts of wooded shoreline developed, enabling the Prothonotary to invade formerly unsuitable portions of the state.

In Georgia the spread of the Prothonotary into certain areas of the piedmont is fairly well documented, although the invasion is hardly as spectacular as that in Oklahoma, nor can it be attributed to the creation of man-made lakes. During recent decades, the bird has been found breeding in three areas of the Georgia foothills; but careful scrutiny of the data from these sites indicates that range expansion can be verified at only one area. In the Appalachian Valley of northwestern Georgia, Hamilton (1960) reported the first breeding of the bird at Dalton, while Lux (1962) subsequently discovered a nest at nearby Victory Lake, Floyd County. However, Mrs. Hamilton (pers. com.) informs me that she has seen the Prothonotary regularly in this area since first beginning bird studies there in the 1930s; and she has not observed any increase in the numbers or change in the distribution of the bird during these years. Furthermore, Burleigh (1958) states that in 1859 Alexander Gerhardt found a nest of the Prothonotary at Varnell Station, Whitfield County; and the eggs collected there were sent to Washington and recorded in the catalog of the United States National Museum. Although Harold C. Jones (pers. com.) reports that there was no evidence of breeding from Floyd County prior to Lux's discovery, the status of the bird in that area was somewhat uncertain until that time.

In the Atlanta area at an elevation of around 1,000 feet, W.W. Griffin (1947) reported the discovery of a nest about 3 miles north of Decatur; but he informs me that the Prothonotary is a common summer resident in areas of suitable habitat in Clayton, Fayette, Fulton, and Dekalb Counties. Furthermore, he points out that the bird was just as common in these areas in the late 1930s as it is today; and he states that there is no reliable evidence that the bird was absent from the Atlanta region prior to the 1920s when the Atlanta Bird Club began its explorations. There is no conclusive evidence, therefore, to support range expansion in northwestern or north central Georgia, although the discovery of nests in these areas is rather recent.

In the Athens area, however, the recent influx of this species is quite well documented. Prior to leaving Athens in 1938, Burleigh (1958) regarded the Prothonotary Warbler as a migrant only. Following his departure, many observers worked this region carefully; but the bird was not recorded there during the nesting season until around 1965. Richard H. Peake (1968) reports that the first evidence of nesting came in June 1965, when Ronald Pulliam noted an adult carrying food at Horseshoe Bend in Athens. Since that time Peake reports that the bird has become common along the Oconee River and its tributaries in the Athens area, with strong evidence that it is increasing in numbers.

In Tennessee a completely different situation exists, for Joseph C. Howell (pers. com.) informs me that the continued destruction of woodland habitats along the French Broad, Holston, and Clinch Rivers has reduced the Prothonotary population to a mere relic of a formerly extensive one. Furthermore, he predicts that the continuation of present land use patterns will probably eliminate this once common warbler from Knox County and most of eastern Tennessee.

Applying the two criteria of range expansion in North Carolina provides some interesting results. A careful study of the history of ornithology in the western piedmont reveals that the first observers to visit the areas where the Prothonotary now occurs found the birds during their initial explorations. As mentioned above, Roy Blalock reports that this species was present in the Yadkin River valley as early as 1917, long before any dams were constructed on the river. All other observers in the Yadkin basin informed me that they discovered the Prothonotary almost simultaneously with the

beginning of their interest in birds. Thus it is apparent that this species has been present in certain areas of the Yadkin basin for at least 50 years, even though its numbers may have changed during that period.

Furthermore, the fact that the bird is so abundant along the many unimpounded tributaries of the Yadkin suggests that the creation of lakes may have at best a negligible effect. In fact, the creation of lakes is a mixed blessing for the bird. If the species is already established, as it apparently was in the Yadkin basin, it will actually suffer from the destruction and flooding of its former habitat. The long term effect on the bird is decided only by the land use pattern which emerges once the reservoir has filled. If the adjacent woods are thinned out and cut back from the water's edge and stumps and snags are removed from the area, the bird is not likely to become established.

What appears as inland range expansion may represent a return to formerly occupied territory. As noted above, the Prothonotary occurs in eastern Tennessee at elevations as high as 900 feet; and the cutting of the forests in this area is significantly reducing the size and extent of the population and may eventually eliminate the bird altogether. Gerhardt's 1859 record of the Prothonotary at Varnell Station, Georgia, suggests that the bird might have once occupied currently uninhabited portions of the state prior to the clearing of the forest. In a similar fashion, what appears to be range expansion by the Prothonotary Warbler may simply be the return of the bird to an area which it once occupied, following reforestation of the streams and rivers of the piedmont. The evidence to support this hypothesis, however, is highly circumstantial.

Although future observations may establish range expansion in the Carolinas, there is not enough evidence to accept this view at present. Apparently the Prothonotary Warbler has been present in portions of the piedmont for an indeterminable length of time, although its distribution and numbers may have fluctuated during that period. The creation of lakes, the cutting of the forests, and the eventual turnover of farm land into woodland have undoubtedly had a significant impact on the distribution of this species in the piedmont of most southern states. The effect of each of these changes must be evaluated independently, however, and the picture which emerges from these alterations is far from simple. Until more data are available, it is not possible to draw meaningful conclusions about the population dynamics of this species in the Carolinas.

SUMMARY

The Prothonotary Warbler is a locally common summer resident in the Yadkin River basin of the western North Carolina piedmont, at elevations ranging from 190 to 800 feet, while scattered records indicate its presence in the Catawba River valley and in portions of the upper South Carolina piedmont. To date, there are 16 nesting records from the Yadkin system, three nests from the Catawba valley, and one nest from a tributary of the Savannah River. Due to the localized nature of these records and the lack of documented research in these areas from previous years, it is impossible at present to establish whether inland range expansion has occurred. Close scrutiny of these areas in future years should reveal valuable data concerning the population dynamics of this species.

ACKNOWLEDGMENTS

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WINTER FINCH INFLUX—1968-1969

ROBERT P. TEULINGS

Seventeen years ago, in the winter of 1951-1952, Evening Grosbeaks staged their first heavy flight into the Carolinas. Since that time it has become something of a tradition for *Chat* to devote special coverage to the periodic invasions of grosbeaks and other northern finches into our region. The influx we saw in this past winter certainly deserves a full report, for it ranks as one of the strongest in a decade. Evening Grosbeaks and Purple Finches were widespread and abundant, and in some sections Pine Siskins were found in moderate to heavy concentrations. Impressive numbers of all three species were recorded on the 1968 Christmas count, with the tally of Evening Grosbeaks standing out as truly extraordinary (Table 1).

The massive southward movement of grosbeaks, finches, and siskins last fall was apparently prompted by two compelling factors: population pressure and a scarcity of food. Published reports in *Audubon Field Notes* (February 1969) indicate that an exceptionally successful breeding season occurred in the northeastern Maritime Region in 1968, but that it was followed by an almost total failure of the tree seed crop (both coniferous and deciduous) over large areas of the northern forests. High production of young birds coupled with a subsequent shortage of natural food resulted in a general exodus of northern finches, as well as Black-capped Chickadees and Red-breasted Nuthatches, from their native territory. The migration was felt as far south as Georgia and even into Florida. The only members of the "finch gang" that failed to make an appearance here were the Pine Grosbeaks and White-winged Crossbills.

Here, taken by species, is a summary of what happened in our region:

Evening Grosbeaks.—Signs of a major invasion were unmistakable a full month before the regional Christmas counts were taken. The first grosbeaks were reported in early November when they swept into North Carolina in a sudden wave. They rapidly overspread most of the state and penetrated deeply into South Carolina. A list of initial sightings shows the arrival pattern.

3 November	Raleigh	North Carolina
5 November	Chapel Hill, Durham	
8 November	Winston-Salem	
8 November	Swannanoa	
12 November	York	South Carolina
16 November	Clemson	
19 November	Hartsville	
20 November	Eastover	

In past invasion years we have typically seen only a light scattering of early arrivals followed by a gradual build-up of the wintering population through December and January. But this time the first influx of grosbeaks was unusually strong. Several observers reported that flocks seen during November were the largest they encountered all winter. At Orangeburg, S.C., Harmon Weeks Jr. watched about a hundred Evening Grosbeaks swarm into his yard on the day after Thanksgiving. The first flock of grosbeaks seen by Willie Morrison in Hartsville, S.C., on 19 November numbered 150 to 200 birds, and an even larger flock conservatively estimated at 300 was found feeding along the edge of N.C. Highway 105 near Grandfather Mountain on 30 November.

Quite naturally, the Evening Grosbeaks' arrival here attracted considerable attention. The influx was so widespread that grosbeaks turned up in virtually all sections of North and South Carolina before the season was over, creating excitement among backyard birders who had seen these colorful birds only rarely or never before. Several newspapers picked up the story and there was special television coverage in at least one city. As a news feature, Station WRAL-TV in Raleigh sent out a camera crew to photograph

grosbeaks at Mr. and Mrs. Cecil Perkins' busy feeder. This publicity sparked curiosity and interest even among casual observers.

But unquestionably the people most keenly aware of the invasion, and most directly involved with it, were the bird banders. Busy with traps and mist nets from November until May, they banded more grosbeaks than in any previous winter. The following table shows the numbers banded at seven stations in North Carolina.

<u>Location</u>	<u>Bander</u>	<u>Evening Grosbeaks</u>
		<u>Banded</u>
Southern Pines	Carter	71
Raleigh	Post	1011
Cary	Post, Turbiville	241
Chapel Hill	Teulings	102
Winston-Salem	Hill, Shiffert	314
Zebulon	Potter	43
		<hr/>
		1782

This high level of banding activity will very likely generate useful information through future band recoveries when some of these birds are recaptured or found dead. Analysis of such data adds to our knowledge of migratory movements, rate of survival, and longevity.

On these forays into our region, the grosbeaks have shown ready adaptability to different conditions of habitat, climate, and topography as evidenced by their general distribution from the mountains to the coast. They seem content to stay wherever food is plentiful. As we watch the grosbeaks consume sunflower seed at our feeders, we sometimes forget that they also have a variety of natural foods available to them. At various times through the season grosbeaks were specifically seen eating the seeds or fruits of pine, maple, hackberry, pecan, black cherry, pyracantha, privet, and dogwood. An instance was reported by Eloise Potter of oak leaf galls being eaten: "About noon on 7 February at my home near Zebulon, N.C., I noted six Evening Grosbeaks feeding on oak leaf galls. Using a binocular I was able to see the holes left in the leaves after the birds nipped at them. Sometimes the birds hung parrot-like at the tips of the branches. They wiped their bills frequently after eating. At the same time other grosbeaks were feeding nearby on an abundant supply of sunflower seeds, so the choice of galls as food was not dictated by necessity." Two other interesting variations in diet were also observed. Several people said their grosbeaks occasionally ate suet, which is seldom mentioned as a food for this species. Betty Davis of Rocky Mount, N.C., was surprised to find that grosbeaks liked sugar water she put out for her Baltimore Orioles.

As the time approached for spring departure, it was noticed that the grosbeaks tended to feed for longer periods during the day, fattening up for the migration. Whereas they fed only during the morning hours through most of the season, by early April the grosbeaks commonly stayed at feeders until almost dusk. Will Post reported peak attendance at his station in Raleigh during the period 8 to 25 April. This peak corresponded with a spurt in Chapel Hill and undoubtedly was a sign of heavy movement northward. The migration lasted well into May, with lingerers seen as late as 23 May at Southern Pines and Black Mountain, N.C.

Purple Finches.—For observers who had predicted an "off" year for Purple Finches, the invasion last winter came as a surprise. Since 1957 the finches had followed an alternate year cycle in which strong flights came in the "odd years" (1957, '59, '61, '63, '65, and '67) and weaker flights in the "even years" (1958, '60, '62, '64, and '66). This cycle has now been broken by two good migration years in a row, 1967 and 1968.

Early arrivals were recorded in North Carolina on 12 September at Pea Island on the coast (Lee Jones) and 20 September at Roaring Gap in the mountains (Royce Hough). Appearances elsewhere in the region were spotty until a general influx occurred in early November. The 1968 Christmas Count (*Chat*, 33:15, 1969) showed a good build-up by

the end of December with the largest numbers concentrated in the piedmont section of North Carolina.

Fred Hill Jr. and Jerry Shiffert of Winston-Salem took full advantage of the situation to band over 1,500 Purple Finches during the winter. Their monthly banding totals through the season were as follows:

<u>Nov.</u>	<u>Dec.</u>	<u>Jan.</u>	<u>Feb.</u>	<u>Mar.</u>	<u>Apr.</u>	<u>Total</u>
38	168	386	415	500	18	1,525

Hill wrote that "all trapping was done on the weekends and I was unable to band for the first three weeks in March, so I do not feel that our banding records are entirely indicative of the true numbers of finches in our area." Indeed, the banded birds were probably only a small sample of the available local population at Winston-Salem.

The banders at Winston-Salem, Chapel Hill and Raleigh compiled an interesting list of band recoveries:

TABLE 2. *Purple Finch Recoveries.*

<u>Date Banded</u>	<u>Sex</u>	<u>Banding Location</u>	<u>Date Recovered</u>	<u>Place Recovered</u>
22 April 1968	M	Storrs, Conn.	1 Jan. 1969	Winston-Salem
4 Feb. 1967	M	N. Dartmouth, Mass.	1 Jan. 1969	Winston-Salem
12 March 1966	M	Chapel Hill, N.C.	12 Jan. 1969	Raleigh
12 April 1963*	M	Burrs Mill, N.Y.	4 Feb. 1969	Chapel Hill
5 March 1965	M	Hibbing, Minn.	5 Feb. 1969	Chapel Hill

*Banded less than one year after hatching, this bird was 5½ years old when recaptured.

In addition, two Purple Finches previously banded in North Carolina during the invasions of 1965 and 1967 were recovered at points farther south last season, one at East Point, Georgia, and the other at Silsbee, Texas.

The finches began leaving the region on their migration north in late March. The spring efflux reached its peak during the first half of April, after which the population declined sharply. Only a few stragglers remained after 25 April to be counted on local spring censuses. The last reported sighting of a Purple Finch was on 6 May.

Pine Siskins.—Local reports varied widely, indicating that the siskins were irregular in occurrence and highly variable in abundance. Around North Carolina siskins were: light at Southern Pines (1 banded), heavy at Raleigh (584 banded), light at Chapel Hill (1 banded), heavy at Winston-Salem (371 banded), moderate at Hickory, and moderate at Tryon. In western South Carolina they were found in good numbers on the Christmas count at Anderson, but the population was reported to be low at Clemson. Elsewhere in South Carolina, siskins showed up, at least briefly, along the coast at Hilton Head Island and in the coastal plain at Dillon, Columbia, and Aiken.

Will Post described the siskin season at Raleigh thus:

"Three arrived at my station on 14 November and were banded. Then very few appeared until early January when 10 to 15 started to feed daily. From January to May, there was usually a flock of 100 to 175 siskins in the yard constantly. They were usually in the tops of pines or oaks—all singing. They fed on sunflower seed and bird cake.

"As determined by my banding, an influx of new birds occurred in April, while many of the birds banded earlier departed. Siskins were last seen at my feeder on 17 May."

Crossbills and Redpolls.—Eight Red Crossbills were found on the Christmas count at the Great Smoky Mountains National Park. Outside the mountains, a small flock of 4

Red Crossbills made a brief appearance at a feeder in Winston-Salem on 13 February (Ruth Hill).

Common Redpolls were reported at only one location: Five visited Tom McNeil's feeding station for several days after 9 January at North Wilkesboro, N.C.

No sightings were reported of White-winged Crossbills or Pine Grosbeaks.

House Finches.—Whether or not House Finches are properly classified as members of the "northern finch" family, their status along the Atlantic seaboard is of great ornithological interest. House Finches have been making spotty winter appearances in North Carolina since 1962 and first reached South Carolina during the 1966-1967 winter season.

<u>Year</u>	<u>Places Visited</u>
1962-1963	Zebulon, N.C.
1963-1964	Zebulon, N.C.
1965-1966	Raleigh, N.C.
1966-1967	Cary, N.C. Chapel Hill, N.C. Wendell, N.C. Winston-Salem, N.C. Hartsville, S.C. Greenville, S.C.
1967-1968	Chapel Hill, N.C.

This last season, Mrs. W.J. Underhill again reported House Finches at Wendell, N.C., 15 miles east of Raleigh. Two birds (one in adult male plumage) regularly visited her feeder during a month-long period from 16 December to 16 January.

CONTRIBUTORS

North Carolina
 Asheville—Mrs. Kathleen T. Siler
 Cary—Mrs. Gwendolyn Turbiville
 Chapel Hill—James O. Pullman, Mrs. Elizabeth Teulings
 Durham—Miss Louise Crumpacker
 Flat Rock—Miss Margaret Sandburg
 Hendersonville—Rudolph G. Hosse
 Hickory—Mr. and Mrs. Garvin Hughes
 Hillsborough—Charles H. Blake, J.H. Coman III, Mrs. R.J. Murphy
 North Wilkesboro—Dr. Thomas McNeil, Wendell P. Smith
 Raleigh—Mike M. Browne, Mrs. Edith T. Grosch, Harry LeGrande, Richard T. Mays, William Post Jr., Mrs. Gail T. Whitehurst
 Rocky Mount—Mrs. Betty Davis
 Southern Pines—J.H. Carter III
 Swannanoa—Robert C. Ruiz
 Swansboro—C.J. Spears Jr.
 Tryon—Mrs. Carol D. Grenell
 Wendell—Mrs. W.J. Underhill
 Wilmington—Greg Massey, Birdie Menzel, Dr. James F. Parnell
 Wilson—Dr. Henry D. Habervan
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 Due West—E.H. Bradley
 Eastover—Mrs. Annie R. Faver
 Hartsville—Mrs. T.L. Maxwell, Mrs. Willie M. Morrison
 Hilton Head Island—Mrs. Nancy Butler
 Johnsonville—Mrs. Eileen Gillette
 Orangeburg—Harmon P. Weeks Jr.
 York—Glenn Van Tassel

Route 2, Chapel Hill, N.C. 27514



BIRD WATCHERS'

Roundtable

Bird Finding at Huntington Beach

The northern section of the South Carolina coast has long been regarded as an excellent locality by birders. However, the recent development of the "Grand Strand" as a resort of major proportions with the consequent filling in of salt marshes and clearing of wooded areas has ruined many formerly excellent spots. Fortunately for the amateur ornithologist, there are still some outstanding places within easy driving distances of the resorts. One of these is the recently opened Huntington Beach State Park. This tract was originally a part of the Huntington property that included the area now known as Brookgreen Gardens. The park, which lies opposite the gardens across US Hwy 17, was closed to the public for many years. It is now open, but still is not heavily visited by the average tourists who prefer the neon forest of Myrtle Beach. This is indeed a fortunate circumstance for the bird-finder. It is hoped that South Carolinians will see the value of retaining a relatively undeveloped area within the state park system.

The park is located about midway between Myrtle Beach and Georgetown, just south of Murrell's Inlet. The entrance is not extremely well marked, but the signs advertising Brookgreen Gardens give ample notice. There is no entrance fee, although a small charge is made for the use of picnic tables and camp sites. Swimming is allowed at two places on the beach.

When the bird-finder enters the gate from US 17, he will see that the road turns sharply to the left. This is a good place to make a first stop for birds. The area near the entrance contains a fairly extensive pine forest with deciduous undergrowth. This is a good place to look for typical pine-forest birds, including the Pine Warbler, Brown-headed Nuthatch, and Red-cockaded Woodpecker. The woodpeckers are quite shy and almost silent, but the careful observer should be able to turn them up. During the summer the Yellowthroat and White-eyed Vireo keep up a constant concert in this part of the park.

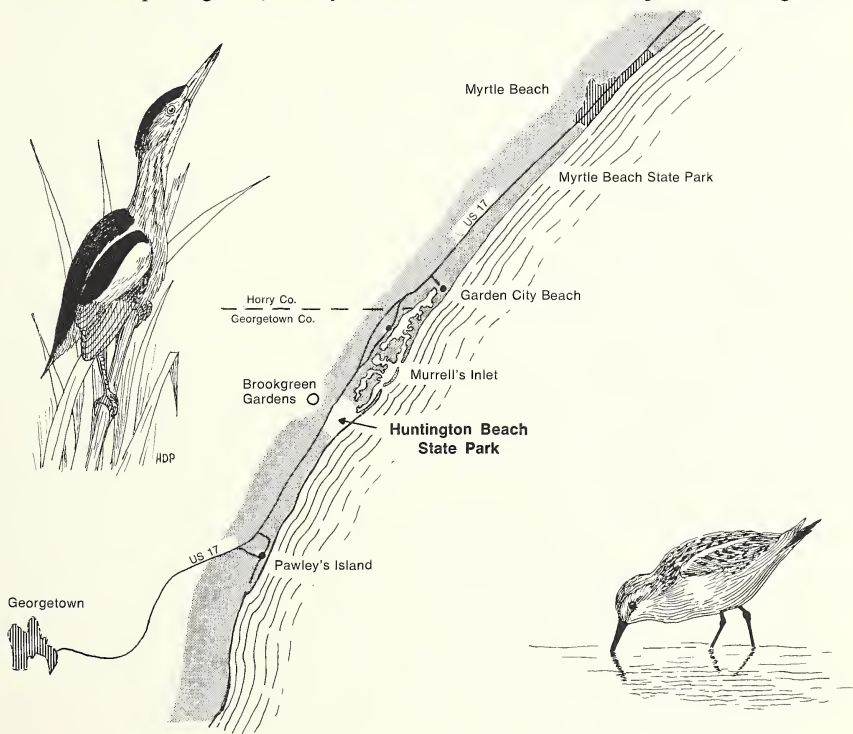
Continuing down the paved road, one passes through an area of large deciduous trees, mostly live oaks, draped in graceful Spanish moss. This is a good area for all the typical woodland birds of the South Carolina coast including the Pileated Woodpecker, Summer Tanager, Acadian Flycatcher, and a host of warblers including the Prothonotary, Parula, Black-throated Green, Yellow-throated, and Hooded. Notice the towhees in this area. They are a different subspecies from those in the Piedmont and have white eyes instead of red. Their call has a "Southern accent" too.

Eventually, the road passes out of the woods and into an open marsh area. This is probably the best spot for birds in the park. A causeway leads across the marsh and

divides it into two sections, one salt and one freshwater. The freshwater section, to your right as you drive across the causeway, is bordered by an extensive cattail growth. There are live alligators in the water that are fed periodically from the causeway by park personnel. Common Gallinules, Coots, and Pied-billed Grebes are present here the year round. In summer, if you wait long enough, you are sure to catch a glimpse of a Least Bittern flying across the causeway. Look for the buffy-brown and black color pattern that will identify the bird.

In the salt-water marsh there are extensive oyster flats that attract hundreds of birds of various kinds. All the herons found in the state can be seen here, including the Common and Snowy Egrets. Clapper Rails and American Oystercatchers are more easily seen here than in many other localities, and Black Skimmers feed in the water channels. The really outstanding feature of this area, however, is the large variety of shorebirds that are attracted to the mudflats. These include such large species as the Willet, Whimbrel, and both Yellowlegs. This is a good place to learn your sandpipers as they stand side-by-side for easy comparison. A spotting scope is useful here but not necessary, as the birds do not seem particularly shy. You should see such sandpipers as Western, Semipalmated, Pectoral, and Dunlin. The plovers include Black-bellied and Semipalmated. The best months for shorebirds are May and August, but there are some of each species present the year round. One should not forget to keep an eye on the sky. Several species of terns (Forster's, Gull-billed, Black, Least) frequent the area, and often one can glimpse an Osprey soaring high over the marsh.

On the other side of the causeway, the road forks, each fork leading to a beach recreation area. The best area for birds is the northern one, so take the left fork. The road passes through heavy myrtle growth which is a favored habitat for the Painted and Indigo buntings. These may both be seen perched on power lines beside the road. When you reach the parking area, leave your car and examine the small pool on the right as



you come into the parking lot. It is a good place for shorebirds. This is a favorite spot for flocks of Tree Swallows except in mid-summer.

An excellent walk can be taken from this area. Walk to the beach and head north. Keeping an eye on both the ocean and the marsh, you should be able to see Sanderling, Ruddy Turnstone, Piping Plover, Knot, Common Tern, Caspian Tern, Royal Tern, and Willet. In winter this area is very productive for ducks on the marsh side and for Red-throated and Common Loons, Horned Grebes, scoters, and Gannets on the ocean side. A spotting scope is recommended for observing birds on the ocean. The sparrows that inhabit the beach grass in winter are probably Song and Savannah Sparrows, but one should always be on the lookout for an Ipswich.

You may return to US 17 the way you came or take the south fork of the road to the other recreation area. Here you will find shrubby vegetation and the birds that go with it such as the Yellow-breasted Chat and the Mockingbird. The beach species are also here, although not in as great abundance as at the northern area.

I hope that many members of the Carolina Bird Club will visit Huntington Beach State Park during the next few months because I believe, this to be the best bird-finding area on the coast between Wilmington and Cape Romain.—HDP

Briefs for the Files

(Continued from Page 51)

also studied carefully by Elizabeth Teulings. Mrs. John Whitlock reported a Cape May Warbler from the home of Mrs. Barrett Crook in Stanly County, N.C., on 15 January. See the General Field Notes for a Raleigh report.

YELLOW-BREASTED CHAT—There were five mid-winter reports. A single bird was present at Morehead City, N.C., throughout the winter, John Fussell. Individuals were also found at Wilmington, N.C., on 10 January, Birdie Menzer; and on 16 January, Betty Everson. A dead chat was found at Litchfield Beach, S.C., on 11 February by Frederick Probst. One chat was present at Due West, S.C., 19 February through 22 March, E.H. Bradley.

DICKCISSEL—An immature bird was seen 24 to 26 October 1968 at Swannanoa, N.C., by Bob Ruiz; and one was a regular visitor to a Wilmington feeder during late December and January, Kitty Kosh.

PAINTED BUNTING—One was very early at Morehead City on 26 February, Doris Williams and Richard Williams.

EVENING GROSBEAK and Other Northern Finches—See summary elsewhere in this issue.

IPSWICH SPARROW—Three were seen on 2 January at the Pea Island National Wildlife Refuge in northeastern North Carolina by Bruce Mack.

HENSLOW'S SPARROW—A small group was found on 10 January during the CBC mid-winter meeting at Lake Mattamuskeet National Wildlife Refuge by Garvin Hughes.

LARK SPARROW—One was seen at Fort Fisher, N.C., on 25 January by Betty Everson.



Conservation

. . . with Marie Mellinger

The Key Word

Cooperation is becoming a key word for naturalists, bird lovers, botanists, foresters, and conservationists in general. The more individuals and organizations can band together, the more effective their combined voices will become.

We are very pleased to have joined in the beginning of such cooperation at the joint meeting of the Georgia Ornithological Society and the Carolina Bird Club, held at Augusta 25-27 April. A joint Seminar of the officers of both clubs, stressing conservation, was held on Saturday afternoon, and hopefully, was the fore-runner of further cooperation between the clubs, and the beginning of a regional group dedicated to conservation of bird species and bird habitat, and to the support of conservation legislation and efforts.

The entire meeting of the CBC and the GOS stressed conservation. Donald W. Phitzer, Conservation Education Coordinator of the United States Dept. of Interior, Fish and Wildlife Service, talked and showed slides on endangered species. He also showed a movie, *So Little Time*, that should be a must for anyone at all interested in birds. This movie is available from the Regional Office of the Dept. of Interior, Peachtree Seventh Building, Atlanta, and from the state Game and Fish Commissions. It runs for twenty minutes with glorious sound and color and has a conservation message that no one could possibly miss.

In another cooperative effort a group of about 100 North Carolina conservationists met at Reidsville in December 1968 to form the Conservation Council of North Carolina. Its purpose is to "provide for more effective and rapid spread of information relating to important conservation issues, through North Carolina persons and organizations interested in conservation." They are hoping for an organization strong enough to have a voice in the state government at Raleigh.

The Council assembled more than 70 delegates for a camp-in at Umstead Park 10-11 May. Rep. Norwood E. Bryan Jr., D-Cumberland, told the group: "Every morning when I go to the State House I see lobbyists for the power companies, lobbyists for the insurance companies and others. The quality of our future environment deserves its own lobby."

Arthur W. Cooper, North Carolina State University botany professor, is president of the Council, and Keith Argow, NCSU forestry specialist, is vice president. Members of the executive committee are C. Ritchie Bell, Chapel Hill; Roy M. Davis, Asheville; Anthony Colucci, Winston-Salem; Robert F. Soots, Buies Creek; James F. Parnell, Wilmington; Mrs. Louise Chatfield, Greensboro; and Robert W. Conner, High Point. CBC President Robert P. Teulings and Mrs. Teulings participated in both organizational meetings of the Council.

James David Almond, formerly Georgia Extension Service Wildlife Specialist, has been named to fill the position of Federal Extension Service Wildlife Specialist, with the job of planning educational and wildlife programs for the Department of Agriculture. David Almond began his wildlife work on the Savannah National Wildlife Refuge at Hardeeville, S.C. He is a dedicated conservationist and we know he will do an excellent job in this important position.

* * * * *

The Georgia Legislature passed the state scenic rivers bill, which will include the Chatooga and the Swanee, but failed in passing the essential coastal wetlands bill. The Georgia Conservancy continues to work for the protection of the coastal islands and the Okefenokee wilderness.

* * * * *

It is again vital to protest against the Great Smoky Mountains National Park trans-mountain road, an issue reopened by Secretary of the Interior, Walter Hickel. All individuals and organizations are again urged to speak against this road.

* * * * *

Vacationing? Take your children on a tour of the Coweeta Hydrologic Laboratory near Otto, N.C., just off 441-23. This beautiful spot offers a chance to see watershed studies and conservation experiments in action.

Cooperative Blackbird Winter Roost Survey

During the winter season of 1969-1970 an intensive survey of blackbird wintering roosts will be conducted in the Carolinas. All persons and local clubs in the vicinity of such roosts are urged to write for convenient, standardized questionnaires which have been prepared to facilitate the reporting of observations. Persons knowing of roosts in their area but unable to study them due to lack of time should write for a questionnaire on which to describe the location of the roosts so that someone else can visit the site. Local clubs are in an excellent position to contribute significantly to this study, either by assigning members to visit the sites at various times or at least by carefully surveying the roosts on the day of the Christmas Count. Persons who have submitted information in past years can also contribute by providing a valuable picture of the changes in the roosts over a period of time.

The data will be compiled to form the basis for further studies of the ecology, population dynamics, and parasitology of the species involved. Previous work indicates an extremely large concentration of these birds in the Carolinas; and precise data, particularly on geographic distribution, are essential for evaluating their impact on the agriculture and economy of the state. CBC members interested in participating should request copies of instructions and questionnaires from: Marcus B. Simpson Jr., P.O. Box 167, Statesville, North Carolina 28677.

Carolina Birds and Birders

. . . with Willie Morrison

Evening Grosbeak Invasion

Many thanks to the readers who sent information on the recent Evening Grosbeak invasion. Most of these reports were forwarded to Robert Teulings for use in the winter finch summary elsewhere in this issue. Like many other CBCers, Mrs. John U. Whitlock of Albemarle, N.C., was pleased to have numerous calls for help in identifying the abundant and colorful grosbeaks. How many of you signed up grosbeak watchers as full-fledged CBC members?

From Hampton, S.C., Mrs. Allan E. Anderson writes: "Evening Grosbeaks came to Hampton en masse throughout January, February, and March. They ate everyone out of sunflower seeds. My husband's idea of extending perching facilities by wiring additional 18-inch wooden rods on each side of the feeders paid off, with lines on each side awaiting turns at the feeders. At the suet feeders are Baltimore Orioles and Red-breasted Nuthatches joining the regulars. Back in the dead of winter, for the third consecutive year, we were visited by Pileated Woodpeckers, cutting away like master woodcutters on dead pines."

The following interesting account comes from Mrs. Richard Falley: "Since the Evening Grosbeak is not listed in *South Carolina Bird Life*, I looked up its history in Thomas Robert's *Birds of Minnesota*. I found that this northern bird was first reported before the National Council of Natural History Society meeting in New York City by a Minnesotian in January 1825.

"In Minnesota the Chippewa Indians named the bird 'Paush Ku da mo' from their verb, paush ka un, meaning 'to break.' This report said that their migratory flights were erratic from year to year and that it was not weather but food supply that brought them down out of Canadian winters."

Henderson Bird Notes

On our breezy knoll, 6 miles from Hendersonville, N.C., we have noticed a complete absence of White-throated Sparrows, usually the most numerous during the winter months. Another aspect that, despite many years of birding, bothered me was the complete absence of even the most common yard birds (no pun intended) during the hot and, on our knoll, completely rainless month of August 1968. There were no Downies, chickadees, nuthatches, Tufted Titmice, or wrens. Of the no less than eight Cardinals, one motheaten male remained. Even the Eastern Bluebirds, of which two pairs raised two broods each the preceding year, disappeared after one pair raised one brood. This has never happened to us before. Where did they go?

Those supposedly spectacular Spring Warbler Invasions seem to elude us. Last September we did have an unusual number of naked-eyed warblers such as Pine, Palm, Hooded, Black-and-white, Yellow-throated, Worm-eating and, as the only summer resident, a Golden-winged Warbler.

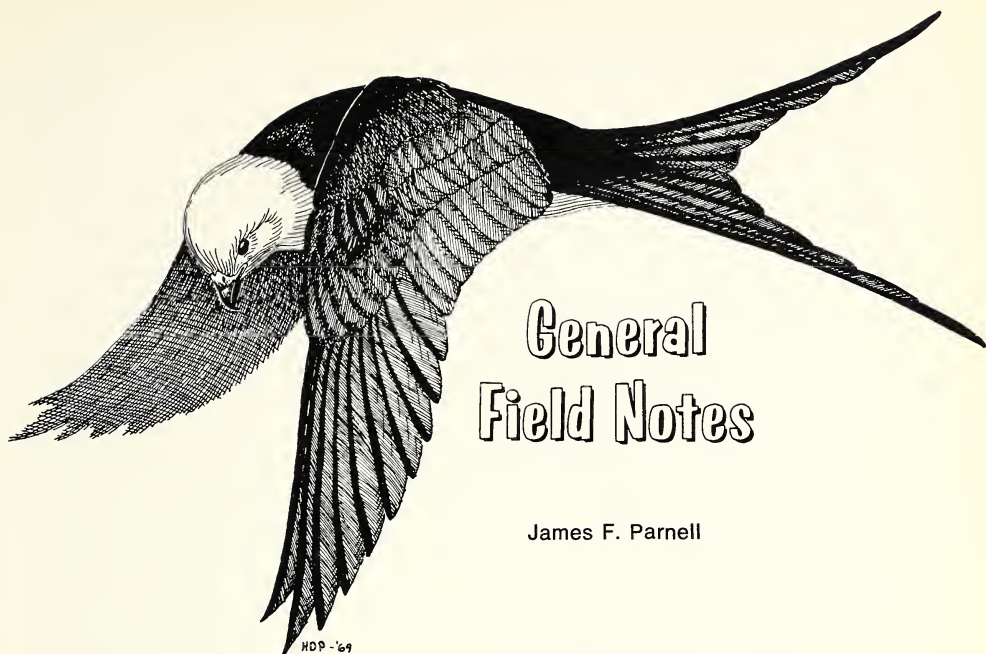
The term "naked-eyed" warbler may need explaining. Many years ago I used to go on birding trips with members of the Linnaean Society and that term was invariably applied to all birds that could be identified without the aid of binoculars--though I ardently hope that is not the only thing I learned from that association!--RUDOLF G. HOSSE, Route 3, Box 287A, Hendersonville, N.C., 6 March 1969.

More Notes from Western North Carolina

Due to its varied habitat many birds find my .6 acre attractive. In the past three years I have listed 114 species within the boundary or flying over. A creek borders one side of the property and makes a curve inward about the middle, while on the other side a highway through a deep rock cut curves inward, giving my place a sort of "hour glass" shape. The boundary line along the highway is a thick mat of shrubby growth covered with vines, while the steep bluff below has understory growth and honeysuckle beneath trees. Above the highway is a deep wooded ridge where Ovenbirds, Black-throated Blue Warblers, Scarlet Tanagers, and Rose-breasted Grosbeaks nest higher up the ridge; but they bring their young down in the valley from early July on through the migration period. Across the creek from my boundary is a marsh where a host of sparrows, Rufous-sided Towhees, Cardinals, a Hermit Thrush, Brown Thrasher, and other birds spend the winter, coming to my yard and feeders during the day.

Nesting around my yard and in the marsh across the creek in the summer of 1968 were six species of warblers: American Redstart, Yellow-throated, Yellow-breasted Chat, Yellow, Golden-winged, and Yellowthroat. A Prairie Warbler was heard occasionally but apparently nested farther down on adjacent land. For the past three years an Acadian Flycatcher has nested along the creek, and in 1967 a Least Flycatcher nested in the yard. A Belted Kingfisher finds the bank along the creek attractive especially since I had the bank lined with heavy rocks to prevent erosion during floods. A Broad-winged Hawk, which nests high on the mountain peak beyond the marsh, comes occasionally to the creek to harass the kingfisher and other birds, but I find the hawk interesting and exciting.

But spring migration is most exciting of all. In 1966 there were as many as 30 Rose-breasted Grosbeaks at one time, eating grain and sunflower seeds from the ground at my doorstep--just like common barnyard chickens. Varying numbers of Rose-breasteds stayed from 26 April through 21 May of that year, singing from trees in the yard, flying around the yard displaying their beautiful black-and-white pattern, and just perched contentedly in the trees. It was a glorious experience.--MARY ENLOE, Route 1, Box 193, Franklin, N.C. 28734



General Field Notes

James F. Parnell

Early Winter Waterfowl Records at Lake Norman, N.C.

DOUG PRATT

Route 3 Box 113L, Charlotte, N.C. 28200

On 23 November 1968 Mecklenburg Audubon Club conducted a field investigation in the area of the southern end of Lake Norman, just north of Charlotte, N.C. The purpose was to determine what species of waterfowl frequent the lake and its environs in early winter. The lake is a recent impoundment compared to most others in the Carolinas and such an investigation was deemed profitable in terms of bringing our ornithological literature up to date. The members of the party included Mr. and Mrs. Adrian Dykema, Mr. and Mrs. J.P. Hamilton, Mrs. Emily Booth, J.M. Petty, Bill Smith, and Doug Pratt.

Party members found an unexpected number of birds both in terms of actual numbers and in variety of species. The greatest concentrations were in the deeper water just north of Cowan's Ford Dam. The presence of many "bay" ducks as well as loons and grebes, which in the past have been confined to the coast, lends credence to the idea that the increasing number of man-made lakes has caused an inland range extension for certain species. The following is a list of all species observed with the number of individuals given in parentheses.

Common Loon (4)
Horned Grebe (50)
Pied-billed Grebe (4)
Great Blue Heron (2)
American Widgeon (60)

Redhead (55)
Bufflehead (4)
Hooded Merganser (7)
Red-breasted Merganser (3)
American Coot (125)

Early Breeding in the Mourning Dove

JOSEPH R. BAILEY

Department of Zoology, Duke University, Durham, N.C.

10 March 1969

On 27 February 1969 Dr. I.E. Gray brought me a nest and two broken eggs containing fledgling Mourning Doves, which had been blown out of a loblolly pine in his yard in Durham the previous day. The accident occurred between 3:30 and 4:00 PM during a high wind. The nest had been on the nearly horizontal lowest limb of the tree, about 25 feet above ground. It was made of pine needles and grass. One of the parent birds returned shortly after the accident and remained near the site for fully an hour. One fledgling has only a tiny remnant of the yolk stalk remaining, measuring about 1.5 mm in length. In the other the yolk had not been completely utilized and the fledgling, claws and eyelids are obviously less developed. The first was probably only a day or so from hatching and the other perhaps a couple of days behind.

Quay (1951:26) gives the incubation period as 14 to 16 days, with the great majority at 14 days. Thus the first egg in this clutch must have been laid between 9 and 12 February. The earliest egg record for North Carolina given by Quay (l.c.:37) in the three years covered by his intensive study is 8 March at Garner. Tyler (in Bent, 1932:415) gives 11 March as the earliest egg record of the species in the eastern US and this for Florida. In Texas and California earlier dates are known.

The winter season at Durham through February had been notable for an absence of severe weather, although a little sleet fell in the area about 16 February. At the same time there had been less warm and sunny weather than usual. Raw, overcast and humid conditions predominated since before Christmas 1968.

LITERATURE CITED

- BENT, A.C. 1932. Life histories of North American gallinaceous birds. Bull. US Nat. Mus. 162.
QUAY, T.L. 1951. Mourning Dove studies in North Carolina. N.C. Wildl. Res. Com., Raleigh.

Cape May Warbler in Late Winter at Raleigh, N.C.

MERILYN D. HATHEWAY

305 Gary Street, Raleigh, N.C. 27606

11 April 1969

During the latter part of the recent winter an immature Cape May Warbler was a regular visitor to feeding stations near our house in Raleigh, N.C. We first observed the bird on 15 February 1969. After it returned twice, we notified Mike Browne and Gilbert Grant, who succeeded in netting the bird and banding it (FWS Band No. 119-68071) on 16 February. The bird continued its visits until 26 March. It survived two snowstorms and several very cold nights. We recorded visits on 24 days, usually between 7 and 10 AM and occasionally shortly before dark. The bird was absent for periods of 4 to 6 days on three occasions.

At first this young bird was not easy to distinguish from the Myrtle Warblers that were common visitors in the same stations. Its breast, however, was more yellow and somewhat more streaked, and the pale yellow collar extending to about the ear, the large white wing patches, and the yellow rump were conspicuous. As spring approached, the breast became bright yellow with strong black streaks, and on 24 March we noticed the development of a few chestnut-colored cheek feathers.

The bird boldly visited a window feeder and a perforated hanging feeder provided with perches, about 10 feet from the house. Both feeders contained suet and a mixture of bacon drippings, corn meal, and peanut butter. Like the Myrtle Warblers, the Cape May Warbler exhibited strong preference for the peanut butter mixture. In its interactions with other species visiting the feeders the Cape May Warbler was conspicuously aggressive, flashing its wings and driving off feeding Myrtle and Pine Warblers and Tufted Titmice. It was driven off in turn only by Starlings, Mockingbirds, and Downy and Red-bellied Woodpeckers.

The Cape May Warbler is normally a transient in North Carolina with most observations occurring in late April and early May or in September and October (*Birds of North Carolina*, 1959).

[Note the further occurrences of Cape May Warblers in North Carolina during the winter season as described in the Briefs in the March and June 1969 issues of *Chat*.—DEPT. ED.]

Briefs for the Files

Compiled by JAMES F. PARNELL
(all dates 1969 unless indicated)

COMMON LOON—One was seen on Beaver Lake at Asheville, N.C., on 17 November 1968 by Bob Ruiz.

RED-NECKED GREBE—Two were found at Topsail Island, N.C., on 1 March by Gilbert Grant.

CATTLE EGRET—Three were seen at Beaufort, N.C., on 1 February by Frank Chapman, and a single bird was seen and photographed on 6 December 1968 near Linville Falls, N.C., by Larry Bancroft. Single birds spent the winter at Morehead City, N.C., John Fussell; and at Wrightsville Beach, N.C., Dorothy Earle.

REDHEAD—A drake was present on a farm pond at Ronda in Wilkes County, N.C., from 26 December 1968 to 29 March 1969, E.M. Hodel.

WHISTLING SWAN—Single birds were found, away from their usual concentrations in northeastern North Carolina, at Huntington Beach State Park, S.C., Frederick M. Probst; and along the Yadkin River at Elkin, N.C., E.M. Hodel.

COMMON MERGANSER—Nine females were found inland at Southern Pines, N.C., on 1 December 1969 by Jay Carter.

BALD EAGLE—An immature bird was found by Eugene Pond near Beaufort, N.C., on 10 January, and was observed almost daily until 9 March.

PURPLE SANDPIPER—One was at Ocracoke Village on 22 December 1968, D. Archibald McCallum.

LEAST SANDPIPERS—Three were found at Raleigh on 18 January by Mike Browne, Harry LeGrande, and Edmund LeGrande.

RAZORBILL—An oiled bird was captured by Eugene Pond and Paul Godfrey at Cape Lookout, N.C., on 25 February.

OLIVE-SIDED FLYCATCHER—A single bird was studied carefully on 16 September 1968 by Jay Carter at Southern Pines, N.C.

ORANGE-CROWNED WARBLER—Individuals were found at Raleigh on 11 January by Robert Hader and on 30 January by Harry LeGrande, and at Greenville, S.C., on 8 January by Jay Shuler. A single bird was found on 18 January about 20 miles SE of Columbia, S.C., in Richland County, Bruce Mack.

CAPE MAY WARBLER—Individuals appeared at three North Carolina locations during the winter season. At Chapel Hill a single bird was seen at the feeder of Sue R. Thompson between 8 January and 9 February. It was

(Continued on Page 44)



Founded 6 March 1937

Incorporated 8 August 1949

Carolina Bird Club is an incorporated association for the study and conservation of wildlife, particularly birds, chiefly in the Carolinas. Founded in 1937 as the North Carolina Bird Club, it was joined in 1948 by several South Carolina natural history clubs and the name changed to the Carolina Bird Club.

MEMBERSHIP

The Carolina Bird Club, Inc., is a non-profit educational and scientific organization. Dues, contributions and bequests to the club are deductible from State and Federal income and estate taxes. Membership is open to anyone interested in birds, natural history and conservation. The several classes of membership are listed below. Checks should be made payable to Carolina Bird Club, Inc., and sent to CBC Headquarters, Box 1220, Tryon, N.C. 28782.

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THE CHAT

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All papers, census reports and notices for publication in *The Chat* should be sent directly to the Editor. However, items intended for the General Field Notes, Backyard Birding, or Conservation departments should be sent to the respective department editors.

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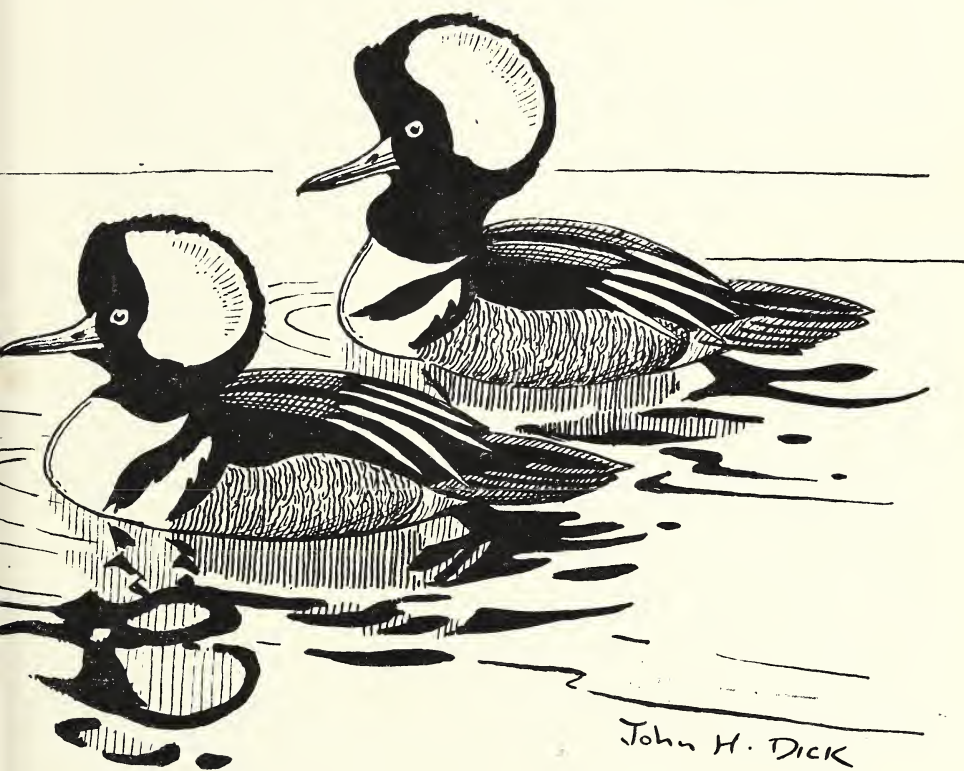
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BIRDS

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John H. Dick



The Chat

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September 1969

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RALEIGH-WAKE COUNTY SPECIAL EDITION

Robert J. Hader's "Species List of Birds of Wake County, N.C." is a very important paper summarizing the work of many bird students, particularly H.H. and C.S. Brimley, and pointing out the changes in bird life that have taken place since the Brimley brothers began keeping records in the early 1880s. Publication of this paper in one issue made it necessary to omit one regular department and to shorten most of the others. The Spring Court, complete with table, will appear in the December *Chat*.

We are particularly grateful to John Henry Dick for the pen and ink drawings that make this special edition unusually beautiful. The map on page 73 was prepared by Fred L. Johns.

SPECIES LIST OF BIRDS OF WAKE COUNTY, NORTH CAROLINA

ROBERT J. HADER

The Wake County, North Carolina avian species list presented herewith is based primarily on the following source material:

- (1) C. S. Brimley's 1930 list "The Birds of Raleigh, N.C.", *Journal of the Elisha Mitchell Society*, 46:74-85.
- (2) *Birds of North Carolina* (BNC), North Carolina Department of Agriculture, 1942 and 1959 editions. The 1942 edition has an appendix "Bird Migration at Raleigh, N.C. from 1885 to 1941" by C.S. Brimley.
- (3) *The Chat*, Vols. 1-32, 1937-1968.
- (4) *Audubon Field Notes* (AFN), Vols. 1-22, and its predecessor *The Season* supplement of *Bird Lore* and *Audubon Magazine*.
- (5) Funderburg, John B. "The Populations, Habitat Relations and Ecological Changes in the Winter Birds of the Raleigh, N.C. Region 1880-1959", Ph.D. thesis, N.C. State University Library, 1959.
- (6) Parnell, James F. "Analysis of Habitat Relations of the Parulidae Passing Through the Raleigh, N.C. Region During the Spring Migration", Ph.D. thesis, N.C. State University Library, 1964.
- (7) North Carolina State Museum specimen collection.

A few other sources are cited where appropriate. In addition some unpublished records of the author (unpub, RJH) and others are included. For the most part, though, the list is based on published records. While the validity of some of these is, no doubt, open to question, the reader will always be able to refer back to the original source and make his own judgment.

The general format of the list consists first of the common and scientific names. These are followed by the present residence and relative abundance status along with a brief indication of changes in status if any. Finally noteworthy records are presented.

Relative abundance terms used are common, fairly common, uncommon, and rare. With respect to actual numbers these terms necessarily have somewhat different interpretations for different species. Common can be taken to mean that in the appropriate season and proper habitat the species could virtually always be found in reasonably substantial numbers. Fairly common can be taken to mean that the species would be found fairly regularly but in small numbers. An uncommon species is one for which at most only a few individuals would be found. A rare species is one for which only a few records exist over a period of many years.

Residence status terms used are permanent resident, summer resident, winter resident, visitor, and transient. The distinction between resident and visitor is that a resident species (though usually not all individuals) is present for the entire season specified while a visitor is present only for a part of the season and generally is somewhat irregular in its appearance. The term transient refers to species passing through in migration only.

Brimley's 1930 list had 214 species plus one hybrid warbler. In 1937 he added six more (*Chat*, 1:9). The present list numbers 278 plus two hybrid warblers, an increase of 59 in the past four decades. The residence and relative abundance status of many others have changed significantly in recent years. Indeed such changes are occurring continually. It is hoped that this species list will be brought up to date periodically. The author would especially appreciate being informed of any significant records omitted from the present version so that these can be included in future revisions.

The author wishes to express his appreciation to Harry T. Davis, W.L. Hamnett, H.L. Jones, J.F. Parnell, Eloise Potter, T.L. Quay, P.W. Sykes Jr., and D.L. Wray who read a

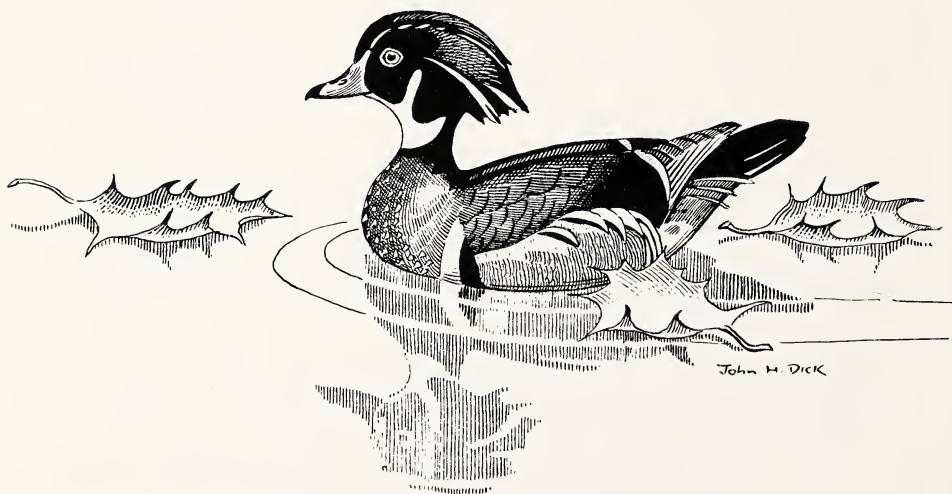
first draft of the manuscript and offered numerous suggestions for its improvement. Dr. Quay was particularly encouraging and helpful in organizing the work.

1. COMMON LOON (*Gavia immer*): Uncommon winter visitor, November through April. Generally single individuals but six seen 12 Nov. 1957 (Funderburg). Eight overhead 10 April 1965 (AFN, 19:461) and 25 overhead 16 April 1966 (unpub., RJH). One summer record "last week of July 1943" (Season, Aud. Mag., Sept.-Oct. '43:5).
2. RED-THROATED LOON (*Gavia stellata*): Rare winter visitor. Only two records are 1 Dec. 1938 (BNC) and 14 May 1966 (Chat, 30:90).
3. RED-NECKED GREBE (*Podiceps grisegena*): Rare winter visitor. Only four records are 2 Nov. 1924 (Brimley, 1930); one collected 10 Feb. 1934 (BNC); two seen 5 May 1951 on spring census; one 19 March -- (BNC, 1959, footnote).
4. HORNED GREBE (*Podiceps auritus*): Fairly common winter resident, November through April. Formerly rare winter visitor. Reported on five of last six Christmas counts but only rarely before 1963. On 3 Dec. 1966, 25 were present at Lake Wheeler (unpub., RJH). Breeding plumage individuals likely in April.
5. WESTERN GREBE (*Aechmophorus occidentalis*): Rare winter visitor. One seen 20 Dec. 1961 (Chat, 26:17) and reported again on Christmas count 28 Dec. 1961.
6. PIED-BILLED GREBE (*Podilymbus podiceps*): Common winter resident, late August through April. Formerly only fall and spring transient. Summer records 21 June 1942 (Season, Aud. Mag., Sept.-Oct. '42:5); 6 Aug. 1959 (Chat, 23:90); 12 Aug. 1952 (Chat, 17: 22).
7. WHITE PELICAN (*Pelecanus erythrorhynchos*): Only record is one killed 12 May 1884 (BNC).
8. DOUBLE-CRESTED CORMORANT (*Phalacrocorax auritus*): Uncommon winter visitor, December to early May. Other dates 31 Oct. 1938 (Chat, 2:64); 1 June 1944 (Chat, 8:60), and 16 June 1913 (BNC).
9. GREAT BLUE HERON (*Ardea herodias*): Fairly common winter resident, late August through April. Occasionally seen in summer. A migrating flock of 25 seen 3 April 1963 (unpub., RJH).
10. GREEN HERON (*Butorides virescens*): Common summer resident, early April to early October. Winter records: 1 Nov. 1942 (Funderburg); 11 Dec. 1946 through 25 Jan. 1947 (AFN, 1:128); Christmas count 21 Dec. 1968.
11. LITTLE BLUE HERON (*Florida caerulea*): Fairly common late summer visitor, early July through early October. Also fairly common spring visitor, April and May. Winter records: 27 Dec. 1946 (Christmas count) and 29 Dec. -- (BNC, 1959, footnote). A group of up to 60 were present during late summer 1965 (AFN, 20:28 and unpub., RJH).
12. CATTLE EGRET (*Bubulcus ibis*): Fairly common spring visitor, April and May. Uncommon late summer visitor, July through September. First record for Wake County 11 April 1962 and several days following when 38 were seen (Chat, 26:27).
13. COMMON EGRET (*Casmerodius albus*): Fairly common late summer visitor, July through September. Uncommon visitor in April. Occasionally present in November and December. Three were seen 19 Dec. 1961, one remaining to at least 24 Dec. (unpub., RJH).
14. SNOWY EGRET (*Leucophoyx thula*): Uncommon late summer visitor, mid-July through early September. First records are apparently those of 1944: two seen 29 July 1944 (Chat, 8:61) and "several" 27 Aug. 1944 (Season, Aud. Mag., Nov.-Dec. '44:4). Two seen July 1964 (Chat, 28:44). Additional records (unpub., RJH) are one 2-8 Sept. 1963; three on 21 July 1965; one 6-20 Aug. 1966.

15. LOUISIANA HERON (Hydranassa tricolor): Uncommon late summer visitor, July through September. Prior to 1942 the only record was 7 July 1927 (BNC). Other published records are 21 June 1942 (Season, Aud. Mag., Sept.-Oct. '42:5) and 7-17 Sept. 1966 (AFN, 21:19). Additional records (unpub., RJH) are three seen 21 Sept. 1963, one remaining to 28 Sept.; three seen 26 Aug. 1967, one remaining to 7 Oct.
16. BLACK-CROWNED NIGHT HERON (Nycticorax nycticorax): Uncommon spring transient and rare summer visitor. BNC, 1942, gives earliest date of four years as 6 April 1915 and latest date of three years as 5 Aug. 1937. State Museum has specimen collected 1 Oct. 1962. Recorded on spring census 30 April 1966 and spring census 22 April 1967. A migrating flock of seven was seen 1 April 1961 (unpub., RJH).
17. YELLOW-CROWNED NIGHT HERON (Nyctanassa violacea): Uncommon spring transient and rare summer visitor. BNC, 1942, indicates spring records in three years. Listed on spring census 1945, 1949, 1950. One seen 11 May 1968 (Chat, 32:80). Several summer records of immatures. John Coffey banded an adult 11 July 1944 and three nestlings 13 July 1944 at Boone's Pond. The following year a nest with two nestlings was found at the same location on 2 June (Chat, 9:76).
18. LEAST BITTERN (Ixobrychus exilis): Uncommon summer resident, late April through September. BNC has 24 Nov. 1910 record.
19. AMERICAN BITTERN (Botaurus lentiginosus): Uncommon spring and fall transient. Also rare winter visitor. Brimley's 1930 list has record 7 Dec. 1886. Funderburg collected specimens 29 Nov. 1956 and 20 Feb. 1957.
20. WOOD IBIS (Mycteria americana): Rare summer visitor. The only records are those given in Brimley's 1930 list and in BNC. In July 1884 a flock was seen and one killed. Another killed 4 July 1906 and from one to six seen and one taken 2-11 July 1927.
21. GLOSSY IBIS (Plegadis falcinellus): Rare spring visitor. Only three published records are 9 May 1965 (AFN, 19:461); 26 April 1966 (Chat, 30:90); 13 May 1967 (Chat, 31:80).
22. WHITE IBIS (Eudocimus albus): Rare summer visitor. Only five published records: 2 July 1960, three "seen over a pond" (AFN, 14:442); 28 March 1961, two "over Raleigh" (AFN, 15:400); 15 July 1964, one at Lake Johnson (Chat, 28:94); 11-21 Aug. 1965, four in a pasture near Lake Wheeler (Chat, 29:116); 11 July to 25 Aug. 1968, two were present at Lake Johnson (Chat, 32:80).
23. WHISTLING SWAN (Olor columbianus): Rare winter visitor, late October through February. A flock of nine was present 10 Dec. 1944 to 25 Feb. 1945 (Season, Aud. Mag., May-June '45:20). Single individual 26 Oct. 1947 and four 18-23 Nov. 1947 (AFN, 2:8). BNC, 1959, footnotes undated 1953 and 1955 records. Also one "early Dec., 1966" (AFN, 21:405); one 19 Nov. 1967 (Chat, 32:30); and one 29 Oct. 1968 by NCSU ornithology students.
24. CANADA GOOSE (Branta canadensis): Fairly common spring and fall transient. Uncommon winter visitor. Probably many recent records are of wandering members of a breeding flock on a farm pond a few miles north of Raleigh. Nesting females at Lake Raleigh, April 1964 and April 1965 (Chat, 28:133 and unpub., RJH) may have been from this flock.
25. FULVOUS TREE DUCK (Dendrocygna bicolor): Only two records: one in Pullen Park, 30 March to 18 June 1965 (Chat, 30:7) and one found at a farm pond in Feb. 1967 (Wildlife in N.C., Feb. 1969).
26. MALLARD (Anas platyrhynchos): Common winter resident, late August through April. Definite breeding records Lake Raleigh 8 May 1943 (BNC, 1959, footnote);

Lake Raleigh 9 June 1962; and Lake Benson 10 June 1962 (Chat, 26:89-90). Other May and June records indicate probable breeding.

27. BLACK DUCK (Anas rubripes): Common winter resident, early October through April. Summer record 4 July 1942 (Season, Aud. Mag., Sept.-Oct. '42:6). F.E. Hester (pers. com.) has six nesting records in Wake County.
28. GADWALL (Anas strepera): Fairly common winter resident, late October to April. Formerly rare. Records apparently start in 1937 (BNC).
29. PINTAIL (Anas acuta): Uncommon winter visitor, October through April. Somewhat more common in October and March. Brimley's 1930 list has only one record. Became regular visitor about 1935.
30. GREEN-WINGED TEAL (Anas carolinensis): Fairly common winter resident, October to April. Formerly uncommon.
31. BLUE-WINGED TEAL (Anas discors): Fairly common fall and spring transient, late August to mid-October and late February through April. Rare in mid-winter.
32. EUROPEAN WIDGEON (Mareca penelope): Only two records are of male on Lake Raleigh 25-26 Oct. and 5 Nov. 1957 (Funderburg) and one reported in Dec. (BNC, 1959, footnote).
33. AMERICAN WIDGEON (Mareca americana): Common winter resident, early October to mid-April. Formerly rare. Brimley's 1930 list gives only two records. Appears on Christmas counts of 1942, 1949, and on all counts since 1951. One summer record 14 June 1942 (Season, Aud. Mag., Sept.-Oct. '42:5).
34. SHOVELER (Spatula clypeata): Uncommon winter visitor, September through April. Somewhat more common in spring. Brimley's 1930 list has only one record.
35. WOOD DUCK (Aix sponsa): Fairly common permanent resident. Somewhat more common in October and uncommon in winter. Nest box project begun in 1954 by Dr. Hester had 92 successful nests at 10 ponds in 1968. Approximately 1,100 young left these nests.
36. REDHEAD (Aythya americana): Uncommon winter visitor, mid-November to mid-March. Not on Brimley's 1930 list. Recorded on about one-fourth of Christmas counts since 1937.



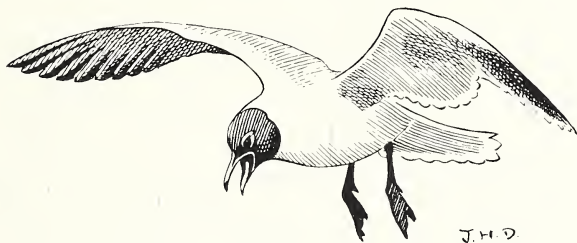
37. RING-NECKED DUCK (Aythya collaris): Common winter resident, October through April. Not on Brimley's 1930 list but added in 1937 (Chat, 1:9). On every Christmas count since 1937. Flocks of 1,000 or more not unusual, especially in November.
38. CANVASBACK (Aythya valisineria): Uncommon winter visitor, mid-November through March. Added to Brimley's list in 1937 (Chat, 1:9). Recorded on about one-third of Christmas counts since 1939. Noteworthy record is flock of 300 seen 25 Nov. 1966 (Chat, 31:27).
39. GREATER SCAUP (Aythya marila): Rare winter visitor, December through March. Difficult to distinguish from next species. "May be more common than records indicate" (Funderburg). Three on Christmas count 20 Dec. 1963. Five to ten 23-24 March 1967 (Chat, 31:50). Funderburg saw several and collected one in Dec. 1956.
40. LESSER SCAUP (Aythya affinis): Fairly common winter resident, late October through April. Recorded on almost every Christmas count.
41. COMMON GOLDENEYE (Bucephala clangula): Uncommon winter visitor, mid-November to early March. Added to Brimley's list in 1937 (Chat, 1:9). Late records 2 May 1936 (BNC) and 5 May 1945 (spring count).
42. BUFFLEHEAD (Bucephala albeola): Fairly common winter resident, November through April. Recorded on almost every Christmas count since 1950; less frequently earlier.
43. OLDSQUAW (Clangula hyemalis): Rare winter visitor, November through March. Formerly uncommon. Two records since 1950: six 19 Dec. 1958 (Funderburg) and seven 11 Jan. 1964 (Chat, 28:32). Funderburg indicates eight records 1937-1949. BNC has three records March 1936 and Brimley's list has 14 Jan. 1910.
44. WHITE-WINGED SCOTER (Melanitta deglandi): Only published records are 18 and 23 Nov. 1947 (AFN, 2:8) and one seen at Lake Wheeler 15 and 17 Nov. 1968 (Chat, 33:27).
45. RUDDY DUCK (Oxyura jamaicensis): Fairly common winter resident, November through mid-April. Added to Brimley's list in 1937 (Chat, 1:9). Recorded on almost all Christmas counts since 1937. One present entire summer 1964 (Chat, 29:30).
46. HOODED MERGANSER (Lophodytes cucullatus): Fairly common winter resident, November through March. Rare summer resident. Dr. Hester has found four successful nests in his Wood Duck boxes (pers. com.).
47. COMMON MERGANSER (Mergus merganser): Uncommon winter visitor, December through February. Not on Brimley's 1930 list. On about one-fourth of Christmas counts since 1940. Few records almost every year.
48. RED-BREASTED MERGANSER (Mergus serrator): Uncommon winter visitor, November through March. Brimley's 1930 list had only one record. Recorded most winters 1935-1958 (Funderburg) and irregularly since 1958. On four Christmas counts.
49. TURKEY VULTURE (Cathartes aura): Fairly common permanent resident. Recorded on almost all Christmas and spring counts.
50. BLACK VULTURE (Coragyps atratus): Uncommon permanent resident. Recorded on about one-third of Christmas counts but on most of spring counts.
51. SHARP-SHINNED HAWK (Accipiter striatus): Uncommon winter resident and rare summer resident. One or two on almost every Christmas count; on spring count less frequently. Nest with four eggs 5 May 1935 (BNC).
52. COOPER'S HAWK (Accipiter cooperii): Uncommon winter resident and rare summer resident. One or two on almost every Christmas count; on spring count less

- frequently. BNC indicates positive evidence of breeding in Wake County. Brimley took eggs 30 April 1895.
53. RED-TAILED HAWK (Buteo jamaicensis): Fairly common winter resident and uncommon summer resident. Almost always listed on Christmas and spring counts.
 54. RED-SHOULDERED HAWK (Buteo lineatus): Uncommon permanent resident. Brimley found eggs 25 March to 28 April.
 55. BROAD-WINGED HAWK (Buteo platypterus): Uncommon transient and rare summer resident, April to October. Brimley found eggs 22 April to 22 May. Migrating flock of six seen 6 May 1967 (AFN, 21:495).
 56. ROUGH-LEGGED HAWK (Buteo lagopus): Rare winter visitor. One seen 3 Jan. and again, 7 March 1959 (Chat, 23:35). Another seen 15 Jan. 1968 (Chat, 32:27). Unpublished records 28 Feb. 1960 and 22 Oct. 1960 (Eloise Potter, pers. com.).
 57. BALD EAGLE (Haliaeetus leucocephalus): Rare fall and spring transient. Brimleys saw it in ten years (Funderburg). Only published records since 1950 are four years in September or October (1963, 1964, 1965, 1966) and three years in April or early May (1961, 1965, 1966). Two winter records 11 Dec. 1944 (Chat, 9:44) and 11 Feb. 1945 (Funderburg).
 58. MARSH HAWK (Circus cyaneus): Uncommon winter resident September to April. One or two on most Christmas counts.
 59. OSPREY (Pandion haliaetus): Fairly common spring and fall transient, March through May and September to early November. Recorded on Christmas counts 22 Dec. 1947 and 21 Dec. 1968.
 60. PEREGRINE FALCON (Falco peregrinus): Rare spring and fall transient. Recorded on spring census 30 April 1949; two seen 17 April 1956 (Chat, 20:62); one 26 Oct. 1947 (AFN, 2:9); and one seen taking a Lesser Yellowlegs 8 Oct. 1966 (Chat, 30:110).
 61. PIGEON HAWK (Falco columbarius): Rare spring and fall transient, somewhat more likely in fall. Only published record in last 30 years is one seen at Lake Wheeler 21 and 24 Sept. 1968 (Chat, 32:105).
 62. SPARROW HAWK (Falco sparverius): Common winter resident and rare summer resident. Always seen on Christmas counts and almost always on spring counts.
 63. BOBWHITE (Colinus virginianus): Common permanent resident.
 64. TURKEY (Meleagris gallopavo): Rare permanent resident. Funderburg found four flocks during 1956-1959: one of 18 along Swift Creek one of 10 on Penny Tract and two separate flocks of 10 each in Umstead Park. Also present along Neuse River. Nest with 11 eggs found 29 April 1965 near Umstead Park (pers. com., H.L. Jones).
 65. KING RAIL (Rallus elegans): Rare summer resident and uncommon spring and fall transient. Occasionally found in winter. Record 18 Feb. 1966 (Chat, 30:55). State Museum has specimen collected 1 Jan. 1954 at Gresham's Lake.
 66. CLAPPER RAIL (Rallus longirostris): Only four records: BNC gives dates 13 and 21 April, the latter apparently the 21 April 1944 record (Chat, 8:60). State Museum also has specimen collected 28 Sept. 1965, and another dated 6 Sept. 1949.
 67. VIRGINIA RAIL (Rallus limicola): Uncommon spring and fall transient, March through May and September to early October. On spring counts 1964, 1967, 1968. An early record 11 Aug. 1967 (AFN, 22:23).
 68. SORA (Porzana carolina): Uncommon spring and fall transient, April through May and August through October. On spring counts 1950, 1964, 1966, 1967, 1968.
 69. YELLOW RAIL (Coturnicops noveboracensis): Only record is one taken 1 Oct. -- (BNC, 1959, footnote).

70. BLACK RAIL (Laterallus jamaicensis): Rare summer resident. The Brimleys found eight nests 1890-1902 (BNC). No other published records.
71. PURPLE GALLINULE (Porphyryla martinica): Rare summer visitor. Specimen taken 6 June 1887 (BNC). One seen 21 May 1962 (Chat, 26:98) and another 11 Aug. 1967 (Chat, 31:99).
72. COMMON GALLINULE (Gallinula chloropus): Rare spring and fall transient. Brimley's 1930 list gave dates 20 April 1907, 30 May 1916, 21 Sept. 1918, and 9 Nov. 1929. State Museum has six specimens. Also records 16 Oct. 1938 (Chat, 2:71) and 5 Dec. 1956 (Funderburg).
73. AMERICAN COOT (Fulica americana): Common winter visitor, September to April. Formerly scarce transient. On almost all Christmas counts since 1952, but rarely on earlier counts. Flocks of several hundred now seen regularly.
74. SEMIPALMATED PLOVER (Charadrius semipalmatus): Uncommon spring and fall transient, May and August through October. BNC gives three May records. Another is 8 May 1943 (Chat, 7:45). For this and many other shorebird species the fall records have largely accumulated in the past few years when low levels of city reservoirs have provided suitable habitat. (AFN, 8:12; Chat, 28:143, 29:57, and 31:25). Regularly present mid-August to mid-October 1968 with as many as 25 on 7 Sept. 1968 (unpub., RJH).
75. PIPING PLOVER (Charadrius melodus): Only published records are 23 Sept. 1946 (AFN, 1:6) and one netted at Lake Wheeler by Will Post 14 Sept. 1968 (Chat, 33:28).
76. KILLDEER (Charadrius vociferus): Uncommon permanent resident and fairly common winter resident.
77. AMERICAN GOLDEN PLOVER (Pluvialis dominica): Rare spring and fall transient. Only spring records are 3 April 1965 (Chat, 29:90) and 23 March 1968 (Chat, 32:50). Fall records are one killed 1884 (BNC); one seen 31 Oct. 1943 (Chat, 7:80); two seen 5 Nov. 1966 (Chat, 31:25). From one to five were present 21-28 Sept. 1968 (Chat, 33:28).
78. BLACK-BELLIED PLOVER (Squatarola squatarola): Rare fall transient. Records 5-9 Sept. 1966 (Chat, 31:25) and 2 Nov. 1963 (Chat, 28:33). One present 18 Aug. and another 19-26 Oct. 1968 (Chat, 33:28). Also one 19 Sept. 1960 (Eloise Potter, pers. com.).
79. AMERICAN WOODCOCK (Philohela minor): Fairly common winter resident and uncommon permanent resident. Breeding records given in Critcher and Quay paper (Chat, 17:62-68). During 1968 season 39 shot and many more flushed by one hunter (pers. com.).
80. COMMON SNipe (Capella gallinago): Fairly common spring and fall transient and uncommon winter resident, September to early May. Recorded on every Christmas count since 1957 but only twice earlier.
81. WHIMBREL (Numenius phaeopus): Only Wake County record is specimen found dead in residential section of Raleigh and brought to State Museum by Anita Bruce 24 May 1963.
82. UPLAND PLOVER (Bartramia longicauda): Rare transient, March and April. Brimley (1930) considered it "formerly common" but had no records 1915-1940. Six published spring records since 1940. One published fall record 12 Oct. 1946 (Chat, 11:64). Another seen at airport Aug. 1958 by Eloise Potter (pers. com.).
83. SPOTTED SANDPIPER (Actitis macularia): Fairly common spring and fall transient, March to May and July to October. Always seen on spring count. Winter records: 9 Feb. 1930 (Funderburg), two 28 Dec. 1953 (AFN, 8:245), and one on Christmas count 21 Dec. 1968.

84. SOLITARY SANDPIPER (Tringa solitaria): Uncommon spring and fall transient, April to May and July to October. Listed on most spring counts.
85. WILLET (Catotrophorus semipalmatus): Only published records are 13 Aug. 1945 (Chat, 9:76) and 17-18 Aug. 1967 (Chat, 33:25).
86. GREATER YELLOWLEGS (Totanus melanoleucus): Fairly common spring and fall transient, March to May and September to November. On almost all spring counts. Two seen on Christmas count 29 Dec. 1965, remained to mid-January (Chat, 31:25).
87. LESSER YELLOWLEGS (Totanus flavipes): Uncommon spring and fairly common fall transient, March to May and August to October. Up to 50 were present during Sept. 1968 (unpub., RJH and others).
88. PECTORAL SANDPIPER (Erolia melanotos): Uncommon spring and fairly common fall transient, March to April and August to November. Funderbrug gives two early December records. Migrating flock of 50 seen 23 March 1968 (Chat, 32:30).
89. WHITE-RUMPED SANDPIPER (Erolia fuscicollis): Rare spring and fall transient. State Museum has specimen collected 22 May 1909 and two collected 24 May 1909. One seen 15 May 1966 (Chat, 30:91). Fall records: 23 July 1937 (Chat, 1:67), 16 Aug. 1938 (BNC), 1 Sept. 1953 (Chat, 17:96). One banded by Will Post on 8 Sept. 1968 (Chat, 33:28).
90. LEAST SANDPIPER (Erolia minutilla): Uncommon spring and fairly common fall transient, April to May and July to November. Recorded on spring count 1964, 1965, 1966. For fall records see Chat, 31:25. Also present during fall 1968 with up to 40 seen 7 Sept. (unpub., RJH and others), and some remained through December. Christmas count 21 Dec. 1968 had seven.
91. DUNLIN (Erolia alpina): Rare fall transient, October and November. First record 13 Oct. 1962 when four were seen and one collected (Chat, 27:21). Recorded again 15 Oct. 1966 (Chat, 31:25) and 21 Oct. to 25 Nov. 1967 (Chat, 32:30). Also seen 29 Oct. to 18 Nov. 1968 with a maximum of nine on 2 Nov. (unpub., RJH and others).
92. SHORT-BILLED DOWITCHER (Limnodromus griseus): Rare spring and uncommon fall transient. Spring records 27 March and 3 May 1965 (Chat, 29:90). Fall records are one taken 29 July 1884 (Brimley, 1930); 26 Aug. to 12 Sept. 1964 (Chat, 29:57); 29 Aug. to 15 Oct. 1966 (Chat, 31:25). Also 10 seen 7 Sept. 1968 and one to four until 19 Oct. (unpub., RJH and others).
93. STILT SANDPIPER (Micropalama himantopus): Rare fall transient. Record 4 Sept. 1953 (Chat, 17:96). Footnote record in BNC (1959) 1-8 Sept. may be same as preceding. Also present 30 Aug. to 3 Oct. 1968 with seven seen on 24 Sept. (Chat, 33:28).
94. SEMIPALMATED SANDPIPER (Ereunetes pusillus): Rare spring and fairly common fall transient, April to May and August to October. Fall status much dependent on levels of reservoirs as is true for most other shore birds. For 1966 records see Chat, 31:25. Also present Sept. and Oct. 1968 with 75 or more 7 Sept. (unpub., RJH and others).
95. WESTERN SANDPIPER (Ereunetes mauri): Rare spring and fall transient. One spring record 9 April 1967 (Chat, 31:99). Fall records are 17 seen 1 Sept. 1953 (AFN, 8:12) and two seen 5-6 Nov. 1966 (Chat, 31:25). Also one or two on several occasions Sept. and Oct. 1968 (Chat, 33:28).
96. BUFF-BREASTED SANDPIPER (Tringites subruficollis): Only record is 29 Aug. 1966 (Chat, 31:25).
97. RUFF (Philomachus pugnax): Only record is one shot by H.H. Brimley 6 May 1892 (BNC).

98. SANDERLING (Crocethia alba): Only published records are 8 April 1966 (AFN, 20:494); one banded by Will Post 21 Sept. 1968, and two more seen 22 Sept. 1968 (Chat, 33:28).
99. AMERICAN AVOCET (Recurvirostra americana): Only two records are two seen 26 Aug. 1964 (Chat, 29:57) and one 26-30 Sept. 1965 (AFN, 20:29).
100. WILSON'S PHALAROPE (Steganopus tricolor): Only record is one seen 30 March 1968 (Chat, 32:77).
101. PARASITIC JAEGER (Stercorarius parasiticus): Only record is one found dead at TV tower 2 Aug. 1960 (Chat, 24:97).
102. HERRING GULL (Larus argentatus): Rare winter and spring visitor, November to April. Seen in six years prior to 1946 (Funderburg). On Christmas counts 1952, 1958. On five spring counts since 1947. Also four seen 11 Jan. 1968 (Chat, 32:50).
103. RING-BILLED GULL (Larus delawarensis): Uncommon winter visitor and spring transient, November to April. Added to Brimley's list in 1937. On six Christmas counts and seven spring counts with 166 recorded 30 April 1966.
104. LAUGHING GULL (Larus atricilla): Only three records are 15 Nov. 1932 (Chat, 1:9), 27 Nov. 1937 (BNC), and 18 Nov. 1938 (Funderburg).



105. BONAPARTE'S GULL (Larus philadelphia): Rare winter visitor and spring transient, November to April. First record is 17 Dec. 1944 (Chat, 9:13). On spring count 1966 and again 13 Nov. 1966 (Chat, 31:27). Several April 1967 records (Chat, 31:50; AFN, 21:496). Two seen 26 March 1968 (Chat, 32:50).
106. GULL-BILLED TERN (Gelochelidon nilotica): Only records are three seen 4 Sept. and one 7 Oct. 1967 (Chat, 32:31).
107. FORSTER'S TERN (Sterna forsteri): Rare spring and fall transient. Only published fall records are 30 Aug. 1966 (Chat, 31:27) and 28 Oct. 1967 (AFN, 22:23). Only published spring records are three seen 26 April 1965 (Chat, 29:90) and four seen 14 May 1966 (Chat, 30:91).
108. COMMON TERN (Sterna hirundo): Only published records are 5 Sept. 1938 (Chat, 2:51) and 13 Aug. 1968 (Chat, 33:28). Four seen 26 Sept. to 10 Oct. 1964 and one 14 Oct. 1965 (unpub., RJH).
109. SOOTY TERN (Sterna fuscata): Only records are 30 June 1909 and 2 Aug. 1926, given in BNC.
110. LEAST TERN (Sterna albifrons): Only record is 10 Oct. 1952 (Chat, 16:102).
111. CASPIAN TERN (Hydroprogne caspia): Rare spring and fall transient, April and September. First record is 1947 spring count. Four were seen 14 Sept. 1963 (Chat, 27:79). Other records 19 and 25 April 1965 (Chat, 29:87). The May date in this reference is an error. Eight were seen on 1967 spring count, three on 5 Sept 1966 (Chat, 31:27), and five on 4 Sept. 1968 (Chat, 33:28).

112. BLACK TERN (Chlidonias niger): Uncommon spring and fall transient, April to May and August to October.
113. DOVEKIE (Plautus alle): Only record is of one picked up dead on 8 Dec. 1950 (Chat, 15:11).
114. ROCK DOVE (Columbia livia): Common permanent resident.
115. MOURNING DOVE (Zenaidura macroura): Common permanent resident.
116. PASSENGER PIGEON (Ectopistes migratorius): Extinct. BNC records that H.H. Brimley spent several hours observing one near Raleigh on 18 April 1891.
117. YELLOW-BILLED CUCKOO (Coccyzus americanus): Fairly common summer resident, late April to mid-October.
118. BLACK-BILLED CUCKOO (coccyzus erythrophthalmus): Rare spring and fall transient. BNC records that on 15 July 1886 C.S. Brimley shot a female that contained an egg. BNC (1959) also has footnote record of nest found at Raleigh.
119. BARN OWL (Tyto alba): Rare, but residence status unclear. Brimley thought it was probably a permanent resident but had only January, February, and April records. State Museum has specimens dated 2 Oct. 1925, 23 Dec. 1950, 6 Jan. 1951, 19 Sept. 1951, and 11 May 1962. Fred Johns and John Erickson found and photographed a nest with two young on 30 April 1965 (pers. com.).
120. SCREECH OWL (Otus asio): Uncommon permanent resident.
121. GREAT HORNED OWL (Bubo virginianus): Uncommon permanent resident. Funderburg found four pairs during winter of 1957-1958 and three pairs during winter of 1958-1959. Brimley gives egg dates 9 to 26 March. Nest with two young found 5 March 1947 (AFN, 1:128).
122. BARRED OWL (Strix varia): Uncommon permanent resident, but found somewhat more frequently than the preceding species.
123. LONG-EARED OWL (Asio otus): Rare winter visitor. BNC gives six Wake County records from 2 Nov. to 24 Feb. Funderburg found one 10 Nov. 1957.
124. SHORT-EARED OWL (Asio flammeus): Rare winter visitor. Brimley recorded it 13 times 1886-1939. Only published record since 1939 is one seen 6 Oct. 1968 (Chat, 32:106).
125. SAW-WHET OWL (Aegolius acadicus): Rare winter visitor. BNC has four records all in December. Funderburg saw one 2 Dec. 1956. State Museum has skin dated 16 Dec. 1962. Prof. J. Duffield kept an injured Saw-Whet Owl alive in his home for a week during Jan. 1968 (pers. com.).
126. CHUCK-WILL'S-WIDOW (Caprimulgus carolinensis): Uncommon summer resident, April to September. More common than next species in eastern Wake County.
127. WHIP-POOR-WILL (Caprimulgus vociferus): Common summer resident, April to October. An early record is one taken in a building on NCSU campus 5 March 1955 (Chat, 19:87).
128. COMMON NIGHTHAWK (Chordeiles minor): Fairly common summer resident, April to October.
129. CHIMNEY SWIFT (Chaetura pelagica): Common summer resident, April to October.
130. RUBY-THROATED HUMMINGBIRD (Archilochus colubris): Fairly common summer resident, April to October. A winter record of one caught in a greenhouse 7 Dec. 1934 (BNC).
131. BELTED KINGFISHER (Megasceryle alcyon): Fairly common permanent resident.

132. YELLOW-SHAFTED FLICKER (Colaptes auratus): Common permanent resident.
133. PILEATED WOODPECKER (Dryocopus pileatus): Uncommon permanent resident. Funderburg found three pairs along Swift Creek and 12-15 along the Neuse River. One seen on 1968 Christmas count.
134. RED-BELLIED WOODPECKER (Centurus carolinus): Common permanent resident. Both Christmas and spring counts show clear increase in numbers especially since 1963.
135. RED-HEADED WOODPECKER (Melanerpes erythrocephalus): Fairly common permanent resident.
136. YELLOW-BELLIED SAPSUCKER (Sphyrapicus varius): Fairly common winter resident, October to April.
137. HAIRY WOODPECKER (Denrocopos villosus): Fairly common permanent resident. Found in small numbers on every Christmas and spring count.
138. DOWNY WOODPECKER (Denrocopos pubescens): Common permanent resident. Considerably more numerous than the preceding species.
139. RED-COCKADED WOODPECKER (Dendrocopos borealis): Only published records are 22 April 1891; 28 April 1898; and a third undated, all given in Brimley's 1930 list. State Museum has specimen collected 2 Jan. 1912.
140. EASTERN KINGBIRD (Tyrannus tyrannus): Common summer resident, mid-April to mid-September.
141. GRAY KINGBIRD (Tyrannus dominicensis): Only record is 16 April 1959 (Chat, 23:67).
142. GREAT CRESTED FLYCATCHER (Myiarchus crinitus): Common summer resident, mid-April to mid-September.
143. EASTERN PHOEBE (Sayornis phoebe): Fairly common permanent resident. From one to five on most Christmas counts but none in 1966 or 1967. Brimley found it least common in summer.
144. SAY'S PHOEBE (Sayornis saya): Only record is 23 Oct. 1965 (Chat, 30:28). [No specimen and only one sight record for state.-ED.]
145. YELLOW-BELLIED FLYCATCHER (Empidonax flaviventris): Rare spring and fall transient. Only three published records. One seen 30 April 1953 (Chat, 17:77) and one seen and heard 20 Aug. 1966 (Chat, 30:111). One banded 5 Oct. 1968 by Will Post and others (Chat, 33:28). One seen and heard 7 May 1960 by Potters (pers. com.).
146. ACADIAN FLYCATCHER (Empidonax virescens): Common summer resident, late April to early September.
147. TRAILL'S FLYCATCHER (Empidonax traillii): Rare spring and fall transient. The Brimleys saw it only four times - twice in May, once in August, and once in Sept., all prior to 1900 (BNC). No other published records. One was banded 6 Oct. 1968 by Will Post (pers. com.). One seen and heard 7 May 1960 by Potters (pers. com.).
148. LEAST FLYCATCHER (Empidonax minimus): Rare spring transient. Listed on six spring counts back to 1956. No other published records.
149. EASTERN WOOD PEWEE (Contopus virens): Common summer resident, late April to early October.
150. HORNED LARK (Eremophila alpestris): Uncommon winter visitor, December to February. Also recorded on spring counts 1963, 1964, 1967, 1968. Since 1965 a pair have nested at the NCSU Faculty Club raising two or more broods each year.
151. TREE SWALLOW (Iridoprocne bicolor): Fairly common spring and uncommon

- fall transient, March to May and July to September. Flocks of several hundred likely in spring. A high of 1,000 recorded on 1964 spring count. Generally only a few individuals in late summer and fall.
152. BANK SWALLOW (Riparia riparia): Uncommon spring and rare late summer transient, April to May and July to September. Prior to 1942 BNC has only three records. Recorded on last five spring counts (1,200 in 1964) and irregularly back to 1951.
 153. ROUGH-WINGED SWALLOW (Stelgidopteryx ruficollis): Fairly common summer resident, late March to July.
 154. BARN SWALLOW (Hirundo rustica): Fairly common summer resident, April to September. Formerly transient only. Began nesting in 1961 and has gradually increased in each succeeding year (Chat, 27:62-64).
 155. CLIFF SWALLOW (Petrochelidon pyrrhonota): Rare spring and fall transient, April to May and July to September.
 156. PURPLE MARTIN (Progne subis): Fairly common summer resident, late March to early September.
 157. BLUE JAY (Cyanocitta cristata): Common permanent resident.
 158. COMMON CROW (Corvus brachyrhynchos): Common permanent resident.
 159. FISH CROW (Corvus ossifragus): Residence status needs clarification. First recorded 24 March 1962 (Chat, 26:49). Has been listed on all spring counts since 1964. No breeding records. Was present through fall of 1968 with 47 recorded on Christmas count.
 160. CAROLINA CHICKADEE (Parus carolinensis): Common permanent resident.
 161. TUFTED TITMOUSE (Parus bicolor): Common permanent resident. An unusual record is one seen feeding young 26 Oct. 1947 (AFN, 2:8).
 162. WHITE-BREASTED NUTHATCH (Sitta carolinensis): Fairly common permanent resident.
 163. RED-BREASTED NUTHATCH (Sitta canadensis): Fairly common winter resident some years but absent other years. On about half of Christmas counts. Usually arrives in early October and departs by mid-April.
 164. BROWN-HEADED NUTHATCH (Sitta pusilla): Common permanent resident.
 165. BROWN CREEPER (Certhia familiaris): Fairly common winter resident, October to mid-April.
 166. HOUSE WREN (Troglodytes aedon): Fairly common summer resident and rare winter visitor. Formerly only transient. Became summer resident about 1922 (BNC). Winter records 4 and 16 Feb. 1953 (Chat, 17:50) and Christmas counts 1965, 1966, 1967, 1968.
 167. WINTER WREN (Troglodytes troglodytes): Fairly common winter resident, October to April.
 168. BEWICK'S WREN (Thryomanes bewickii): Rare winter visitor. BNC (1942) indicates that Brimley had records in 10 years. One seen on spring count in 1947; two on Christmas counts of 1951 and 1952; one at a feeder 30 Jan. 1965 (Chat, 29:58).
 169. CAROLINA WREN (Thryothorus ludovicianus): Common permanent resident.
 170. LONG-BILLED MARSH WREN (Telmatodytes palustris): Uncommon spring and fall transient, April to May and September. Also rare winter visitor. Two January 1890 dates given in BNC. Seen on five spring counts.

171. SHORT-BILLED MARSH WREN (Cistothorus platensis): Rare spring and fall transient. The Brimleys saw it on only three occasions: 4 May 1892, 10 Aug. 1894, and 20 Sept. 1893 (BNC). The only other published records are of one seen on the 1964 spring count and one 8 Sept. 1968 (Chat, 33:29). From 6-17 Aug. 1965 at least six were present and singing vigorously in a field near Lake Raleigh (unpub., RJH and S. Fretwell).
172. MOCKINGBIRD (Mimus polyglottos): Common premanent resident.
173. CATBIRD (Dumetella carolinensis): Common summer resident and uncommon winter resident. Has been found on nine Christmas counts.
174. BROWN THRASHER (Toxostoma rufum): Common permanent resident. Less common in winter but found on all but one Christmas count back to 1945. Number of wintering individuals has apparently increased over the last two decades.
175. ROBIN (Turdus migratorius): Common permanent resident. Winter numbers fluctuate considerably. Christmas counts range from none to 500.
176. WOOD THRUSH (Hylocichla mustelina): Common summer resident, April to mid-October. A winter record of one taken 3 Jan. 1943 (Funderburg).
177. HERMIT THRUSH (Hylocichla guttata): Fairly common winter resident, mid-October to April. On almost all Christmas counts.
178. SWAINSON'S THRUSH (Hylocichla ustulata): Fairly common spring and fall transient, late April to May and late September to mid-October.
179. GRAY-CHEEKED THRUSH (Hylocichla minima): Uncommon spring and fall transient, May and early October. Seen on spring count last five years and twice earlier.
180. VEERY (Hylocichla fuscescens): Fairly common spring and fall transient, late April to early May and September. On spring count most years.
181. EASTERN BLUEBIRD (Sialia sialis): Fairly common permanent resident.
182. BLUE-GRAY GNATCATCHER (Poliophtila caerulea): Common summer resident, late March to September. Two were listed on the 1967 Christmas count.
183. GOLDEN-CROWNED KINGLET (Regulus satrapa): Common winter resident, October to early April. Only spring count record is 22 April 1967.
184. RUBY-CROWNED KINGLET (Regulus calendula): Common winter resident, October to early May. Unusually numerous in 1967-1968 with 250 recorded on Christmas count.
185. WATER PIPIT (Anthus spinoletta): Uncommon winter visitor, October to April. Found on Christmas counts in about half of years.
186. CEDAR WAXWING (Bombvquilla cedrorum): Fairly common winter and rare summer resident. On most Christmas and spring counts. Nesting record 13 June 1890 (BNC).
187. LOGGERHEAD SHRIKE (Lanius ludovicianus): Fairly common permanent resident. Formerly only winter resident. First breeding record 27 April 1942 (Season, Aud. Mag., July-Aug. '42:5).
188. STARLING (Sturnus vulgaris): Common permanent resident. First recorded in Raleigh area 19 April 1923.
189. WHITE-EYED VIREO (Vireo griseus): Common summer resident, late March to September.
190. YELLOW-THROATED VIREO (Vireo flavifrons): Fairly common summer resident, April to early September. Winter record 16 Dec. 1960 (Chat, 25:90).

191. SOLITARY VIREO (Vireo solitarius): Uncommon permanent resident; somewhat more common in spring. Always seen on spring count but recorded on only four Christmas counts. Funderburg gives a number of winter records including 10 seen feeding on a black locust tree 19 Feb. 1957. BNC has two nesting records. Two other nesting records are 19 April 1942 (Season, Aud. Mag., July-Aug. '42:5) and undated record (AFN, 1:175).
192. RED-EYED VIREO (Vireo olivaceus): Common summer resident, mid-April to early October.
193. PHILADELPHIA VIREO (Vireo philadelphicus): Only records are one in May footnoted in BNC (1959) and one 6 Oct. 1966 (Chat, 30:111).
194. WARBLING VIREO (Vireo gilvus): Only record is one listed on spring count 1 May 1948.
195. BLACK-AND-WHITE WARBLER (Mniotilta varia): Uncommon summer resident, late March to October. More common in migration. Only published nest record is 12 May 1893 (BNC).
196. PROTHONOTARY WARBLER (Protonotaria citrea): Fairly common summer resident, mid-April to early September.
197. SWAINSON'S WARBLER (Limnothlypis swainsonii): Only record is of one picked up at base of TV tower 14 Sept. 1963. State Museum has this skin.
198. WORM-EATING WARBLER (Helmitheros vermivorus): Uncommon spring and fall transient, mid-April to mid-May and September.
199. GOLDEN-WINGED WARBLER (Vermivora chrysoptera): Rare spring and fall transient. Brimley's 1930 list has two May records and two late August records. Has been seen on four spring counts. Parnell's intensive spring warbler migration study yielded only one record for two years.
200. BLUE-WINGED WARBLER (Vermivora pinus): Uncommon spring and fall transient, late April to mid-May and late August to September. BNC indicates eleven records from 1887-1941. Seen on nine spring counts including last five years. Parnell's study yielded eight records.
- 200a. BREWSTER'S WARBLER (V. chrysoptera x V. pinus): Rare hybrid of Blue-winged and Golden-winged warblers. Brimley's 1930 list had one record 6 Sept. 1888. Parnell collected one 3 May 1963.
- 200b. LAWRENCE'S WARBLER (V. chrysoptera x V. pinus): Rare hybrid of Blue-winged and Golden-winged warblers. Recorded on spring count 1 May 1948 and again 29 April 1965 (Chat, 29:88).
201. BACHMAN'S WARBLER (Vermivora bachmanii): Only records are one collected 27 April and another 22 May 1891 (BNC).
202. TENNESSEE WARBLER (Vermivora peregrina): Uncommon fall transient, mid-September to October. BNC indicates only four fall records. In recent years it has been seen fairly regularly (Chat, 28:143 and 30:56). State Museum has specimen collected at TV tower 3 Oct. 1957. Parnell had one spring record 24 April 1963.
203. ORANGE-CROWNED WARBLER (Vermivora celata): Rare spring and fall transient and winter visitor. Four published records: 12 Jan. 1960 (AFN, 14:300), 21 March to 5 April 1964 at feeder (Chat, 28:55), 22 April 1967 (spring count), and 12 Oct. 1968 (Chat, 33:29).
204. NASHVILLE WARBLER (Vermivora ruficapilla): Only published records are one 4 May 1963 (Parnell), one 3 May 1966 (Chat, 30:91), one 2 Oct. 1967 (Chat, 32:28), 1 Oct. 1968 (Chat, 33:29), and one banded by Will Post 10 Oct. 1968 (Chat, 33:29).

205. PARULA WARBLER (Parula americana): Fairly common summer resident, especially in eastern part of the county, from early April to early October. More common in migration.
206. YELLOW WARBLER (Dendroica petechia): Fairly common summer resident, mid-April to September. Uncommon after July.
207. MAGNOLIA WARBLER (Dendroica magnolia): Fairly common spring and fall transient, May and September to early October. Somewhat more numerous in fall.
208. CAPE MAY WARBLER (Dendroica tigrina): Uncommon spring and fall transient, late April to early May and late September to mid-October. On spring count six years. Parnell had seven spring records in his two year study. State Museum has seven specimens all collected between 20 Sept. and 1 Nov.
209. BLACK-THROATED BLUE WARBLER (Dendroica caerulescens): Fairly common spring and uncommon fall transient, mid-April to late May and mid-September to mid-October. One record 19 Nov. 1886 (BNC).
210. MYRTLE WARBLER (Dendroica coronata): Fairly common winter resident, October to mid-May. Considerably more numerous in April and October.
211. BLACK-THROATED GREEN WARBLER (Dendroica virens): Uncommon spring and fall transient, April to May and September to mid-October. Seen on only three spring counts. Parnell found only one, 14 May 1963, in his two year spring study.
212. CERULEAN WARBLER (Dendroica cerulea): Rare spring and fall transient. Brimley had records 8 May 1893, 29 Aug. 1889, 16 Sept. 1887 and 1916. Only other published records are spring counts 1951 and 1964 and one seen 6 May 1967 (Chat, 31:80).
213. BLACKBURNIAN WARBLER (Dendroica fusca): Rare spring and fall transient. BNC (1942) gives earliest fall date of seven years as 10 Sept. One found dead at base of TV tower 7 Sept. 1962 (Chat, 26:87). One seen 6 Oct. 1967 (Chat, 32:28). Listed on four spring counts. Parnell saw only one 3 May 1963.
214. YELLOW-THROATED WARBLER (Dendroica dominica): Fairly common summer resident, late March to mid-September. One seen 27 Nov. 1968 (Chat, 33:29).
215. CHESTNUT-SIDED WARBLER (Dendroica pensylvanica): Uncommon spring and fall transient, late April to mid-May and late August to early October. Somewhat more common in fall.
216. BAY-BREASTED WARBLER (Dendroica castanea): Rare spring and fall transient. Brimley's 1930 list gives only one record 5 May 1915. Parnell had no records. State Museum has specimens collected at TV tower 5 Oct. 1957 and 4 Oct. 1962. Other records are 8 and 9 Sept. and 12 Oct. 1966 (Chat, 31:28). Also seen 30 Sept. and 5 Oct. 1968 (unpub., RJH).
217. BLACKPOLL WARBLER (Dendroica striata): Fairly common spring and fall transient, late April through May and late September to late October. Less common in fall but State Museum has specimens collected 25 Oct. 1941, 5 Oct. 1957, and 4 Oct. 1962.
218. PINE WARBLER (Dendroica pinus): Common permanent resident.
219. PRAIRIE WARBLER (Dendroica discolor): Common summer resident, April to September.
220. PALM WARBLER (Dendroica palmarum): Fairly common spring and fall transient, April and mid-September through October. Also uncommon winter resident. Recorded on six Christmas counts.
221. OVENBIRD (Seiurus aurocapillus): Common summer resident, early April to

mid-October. Recorded on Christmas count 22 Dec. 1947.

222. NORTHERN WATERTHRUSH (Seiurus noveboracensis): Fairly common spring and fall transient, mid-April through May and August to early October.
223. LOUISIANA WATERTHRUSH (Seiurus motacilla): Fairly common summer resident, mid-March through July.
224. KENTUCKY WARBLER (Oporornis formosus): Fairly common summer resident, late April through September. Recorded on all spring counts since 1961 but on only one earlier count. BNC (1942) gives an earliest date 15 April based on 33 years of records.
225. CONNECTICUT WARBLER (Oporornis agilis): Rare fall transient. BNC gives five records ranging from 28 September to 24 October. No records since 1918.
226. YELLOWTHROAT (Geothlypis trichas): Common summer resident, late March to mid-October. Also rare winter visitor. Brimley (1930) listed five winter dates. Seen on Christmas counts 1950 and 1967. Other winter records are 22 Dec. 1964 (Chat, 29:58), 21 Nov. 1965 (Chat, 30:32), and 20 and 25 Jan. 1966 (Chat, 30:56).
227. YELLOW-BREASTED CHAT (Icteria virens): Common summer resident, late April through September. D.L. Wray saw one 15 Jan. 1950 (pers. com.).
228. HOODED WARBLER (Wilsonia citrina): Common summer resident, mid-April through September.
229. WILSON'S WARBLER (Wilsonia pusilla): Rare spring and fall transient May and September. Brimley (1930) gives five May records. Two seen on 1945 spring count. Other spring records are 10-17 May 1941 (Chat, 5:55) and 6 May 1967 (Chat, 31:80). Fall records 10 Sept. 1966 (AFN, 21:22), 3 Oct. 1967 (Chat, 32:28), 12 Sept. and 1 Oct. 1968 (Chat, 33:29).
230. CANADA WARBLER (Wilsonia canadensis): Uncommon spring and rare fall transient. Brimley (1930) listed only two May records. Parnell had 15 May records in his two year study. Only published fall record is 7 Sept. 1944 (Chat, 8:78).
231. AMERICAN REDSTART (Setophaga ruticilla): Common summer resident, early April to early October.
232. HOUSE SPARROW (Passer domesticus): Common permanent resident. First appeared in Raleigh about 1879 (BNC).
233. BOBOLINK (Dolichonyx oryzivorus): Fairly common spring and uncommon fall transient, mid-April to late May and mid-August to mid-October. A summer record on 16 July 1966 (Chat, 30:111).
234. EASTERN MEADOWLARK (Sturnella magna): Common permanent resident. Before 1916 it was considered a winter visitor (Brimley, 1930).
235. WESTERN MEADOWLARK (Sturnella neglecta): One was heard singing near Lake Wheeler on 21 Jan. 1968 and again on 3 March 1968 (Chat, 32:104).
236. YELLOW-HEADED BLACKBIRD (Xanthocephalus xanthocephalus): Only two records are published, a male taken in a dove trap 15 Aug. 1952 (BNC) and a female seen 4 May 1962 (Chat, 26:100).
237. RED-WINGED BLACKBIRD (Agelaius phoeniceus): Common permanent resident through quite irregular in mid-winter. From 1944 to 1961 it was recorded on only one Christmas count, but appears on almost all other counts.
238. ORCHARD ORIOLE (Icterus spurius): Fairly common summer resident, late April to early August.
239. BALTIMORE ORIOLE (Icterus galbula): Uncommon spring and fall transient, late April to mid-May and early September. Since 1950 an increasing number of

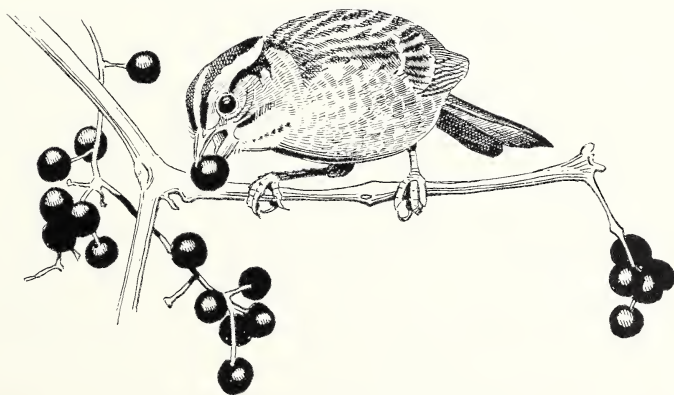
individuals have wintered in Raleigh (Chat, 14:51). Of 65 banded over a nine year period 19 have returned in one or more subsequent years. This study is reported by John E. Erickson "Wintering Baltimore Orioles in N.C." an M.S. thesis, N.C. State University Library, 1966.

240. RUSTY BLACKBIRD (Euphagus carolinus): Uncommon transient and winter visitor, November through April.
241. COMMON GRACKLE (Quiscalus quiscula): Fairly common permanent resident. Large flocks common in fall. Recorded on every Christmas count since 1960 but only twice earlier.
242. BROWN-HEADED COWBIRD (Molothrus ater): Fairly common winter resident and uncommon permanent resident. Appears on about half of Christmas counts and almost all spring counts. Suspected of laying eggs in migration (BNC). Immature seen being fed by female Rufous-sided Towhee first week of June 1968 (Chat, 32:81).
243. SCARLET TANAGER (Piranga olivacea): Fairly common spring and fall transient, late April to early June and September to early October. D.L. Wray saw a pair on 12 July 1952 (pers. com.).
244. SUMMER TANAGER (Piranga rubra): Common summer resident, mid-April through September.
245. CARDINAL (Richmondia cardinalis): Common permanent resident. Adopted as official state bird in 1943.
246. ROSE-BREASTED GROSBEAK (Pheucticus ludovicianus): Uncommon spring and fall transient, late April to early May and September to early October. On spring count six of last seven years plus three years earlier. No published fall records but State Museum has four specimens collected in September and October. Also ten or more personal unpublished records for this period. Winter record of weakened individual taken in Raleigh suburban area 17 Jan. 1968 (T.L. Quay, pers. com.).
247. BLUE GROSBEAK (Guiraca caerulea): Fairly common summer resident, late April to mid-September.
248. INDIGO BUNTING (Passerina cyanea): Common summer resident, late April to early October.
249. DICKCISSEL (Spiza americana): Rare spring and fall transient and winter visitor. Also three pairs bred successfully in a field near Lake Raleigh during May to July 1964 (Chat, 31:85). During the winter of 1967-1968 individuals were seen at three widely separated feeders in Raleigh.
250. EVENING GROSBEAK (Hesperiphona vespertina): Common winter resident some years; absent or rare other years. Generally arrives in November and remains through April. First Raleigh area record is apparently 1946 (BNC, 1959). Major invasions occurred in winter of 1951-52, 1954-55, 1955-56, 1957-58, 1959-60, 1961-62, 1963-64, 1965-66, 1968-69. For published accounts see June or September issues of The Chat for years following invasion winters.
251. PURPLE FINCH (Carpodacus purpureus): Common winter resident, early November through April. Most abundant during major Evening Grosbeak years. BNC, 1959, footnotes a 7 Aug. record.
252. HOUSE FINCH (Carpodacus mexicanus): Rare winter visitor. First record for North Carolina is one seen in Zebulon 22 Nov. 1962. One was seen at the same location 12 and 13 Feb. and collected 26 Feb. 1963 (Chat, 28:64). Reported again in Zebulon during winter of 1963-1964. Three were trapped in Raleigh 26 Feb. 1966 (Chat, 30:68). One was picked up dead 11 Nov. 1966 in Cary, and 10 were banded 13 Feb. 1967 in Wendell with at least six more present (Chat, 31:45).

253. COMMON REDPOLL (Acanthis flammea): Rare winter visitor. Brimley's 1930 list had no record. Eight were listed on Christmas count 27 Dec. 1946. One was seen 22 Dec. 1951 and one on 1 Jan. 1952 (AFN, 6:192).
254. PINE SISKIN (Spinus pinus): Fairly common winter resident some years; absent or rare other years. Generally present from November to early May. Brimley (1930) found it in only eight years up to 1930. Funderburg indicates records in six more years up to 1959. Since 1957 it has been recorded on almost all Christmas counts, but is most abundant during good Evening Grosbeak years.
255. AMERICAN GOLDFINCH (Spinus tristis): Common winter and uncommon summer resident. Nest with young 30 Aug. 1944 (Season, Aud. Mag., Nov.-Dec. '44:4).
256. RED CROSSBILL (Loxia curvirostra): Rare winter and spring visitor. Brimley (1930) gives records 16 and 26 Jan., 8 Feb. 1897; 11 and 23 March 1885; 9 May 1907; 5 June 1887; 8 Nov. 1919. The next published record is 12 March to 6 May 1967 when from one to eight were seen regularly; P.W. Sykes Jr. collected an adult male, an adult female, and an immature female on 6 May. The adult female contained a fully formed egg and another about half developed. The immature was examined at the US National Museum by Roxie Laybourne and estimated to be about 5 weeks old. There is a good possibility it had hatched in Wake County (pers. com. from P.W. Sykes Jr.).
257. WHITE-WINGED CROSSBILL (Loxia leucoptera): Only record is of a flock seen 23 Feb. 1907 by S.C. Bruner who "picked up three stones and threw them in quick succession at the flock. Strange to say he struck a bird with each stone, and all three specimen are now in possession of the State Museum" (BNC).
258. RUFOUS-SIDED TOWHEE (Pipilo erythrophthalmus): Common permanent resident. In 1930 Brimley classified it as a "winter visitor, commonest in migration."
259. SAVANNAH SPARROW (Passerculus sandwichensis): Common winter resident, late September to early May. BNC gives an early date 20 Aug. 1931.
260. GRASSHOPPER SPARROW (Ammodramus savannarum): Fairly common summer resident, mid-April to October. One collected 8 Nov. 1932 (BNC). Another collected 22 Dec. 1947 (Christmas count). One seen 7 to 21 Jan. 1966 (Chat, 30:56).
261. LE CONTE'S SPARROW (Passerherbulus caudacutus): Only two records are one 21 April 1894 (BNC) and another 23 Oct. 1965 (Chat, 30:30).
262. HENSLOW'S SPARROW (Passerherbulus henslowii): Rare spring transient. Brimley's 1930 list gives dates 22 March to 3 May based on 7 years. One recorded 2 May 1950 on spring count.
263. SEASIDE SPARROW (Ammodramus maritima): Only record is one picked up at base of TV tower 5 Nov. 1968. State Museum has this specimen.
264. VESPER SPARROW (Pooecetes gramineus): Uncommon winter resident and fairly common spring and fall transient, mid-October to late April. A few recorded on most Christmas counts.
265. LARK SPARROW (Chondestes grammacus): Only three records are given in BNC: one collected 19 Aug. 1889, one seen 23 Oct. 1893, a deserted nest with four eggs found 24 July 1890.
266. BACHMAN'S SPARROW (Aimophila aestivalis): Uncommon summer resident, early April to September. On spring counts 1961-1968 and once earlier. Nest with three eggs 7 June 1945 (Season, Aud. Mag., Sept.-Oct. '45:46).
267. SLATE-COLORED JUNCO (Junco hyemalis): Common winter resident, late October to late April

268. OREGON JUNCO (Junco oreganus): First specimen record for North Carolina was one collected by J.M. Potter Jr. on 16 March 1960 in Zebulon (Chat, 24:27). Another was sighted at the same location on 23 and 27 Feb. 1966 (Chat, 30:54).
269. TREE SPARROW (Spizella arborea): Rare winter visitor. Not listed by Brimley in 1930 but Funderburg gives record 27-30 Jan. 1921. Two were collected from a flock of three 12 Feb. 1966 (Chat, 31:26). Two other records are 24 Nov. 1967 (Chat, 32:32) and 17 Jan. 1968 (Chat, 32:51).
270. CHIPPING SPARROW (Spizella passerina): Common summer resident, late February to mid-November. Also rare winter resident. Recorded on Christmas counts 1963 to 1968 but not earlier.
271. FIELD SPARROW (Spizella pusilla): Common permanent resident.
272. WHITE-CROWNED SPARROW (Zonotrichia leucophrys): Rare winter resident. Only two records prior to 1964: one taken 14 April 1912 and one taken about 1884 (BNC). Three were seen 9 March 1964 (Chat, 28:55). One seen 19 Oct. 1965 (Chat, 30:33). Flocks of four and twelve at two widely separated locations were present from early December 1967 to 13 April 1968 (AFN, 21:497; unpub., RJH). Five recorded on 1968 Christmas count.
273. WHITE-THROATED SPARROW (Zonotrichia albicollis): Common winter resident, early October to mid-May. One seen through June to 6 July 1944 (Chat, 8:60).
274. FOX SPARROW (Passerella iliaca): Fairly common winter resident, early November to mid-March.
275. LINCOLN'S SPARROW (Melospiza lincolni): Only two records are one taken 16 Feb. 1938 (BNC) and one seen 21 Oct. 1967 (Chat, 32:32).
276. SWAMP SPARROW (Melospiza georgiana): Common winter resident, mid-October to mid-May.
277. SONG SPARROW (Melospiza melodia): Common winter resident, mid-October to late April. Recent breeding record April and May 1965 (Chat, 30:39). Additional records suggest possible breeding range extension (AFN, 21:557; Chat, 32:49).
278. LAPLAND LONGSPUR (Calcarius lapponicus): Only records 13-14 Jan. 1893 and 20 Feb. 1895 (BNC). On the latter occasion four specimens were collected.

North Carolina State University, Raleigh, N.C.



BIRD FINDING AROUND RALEIGH, N.C.

T.L. QUAY and R.J. HADER

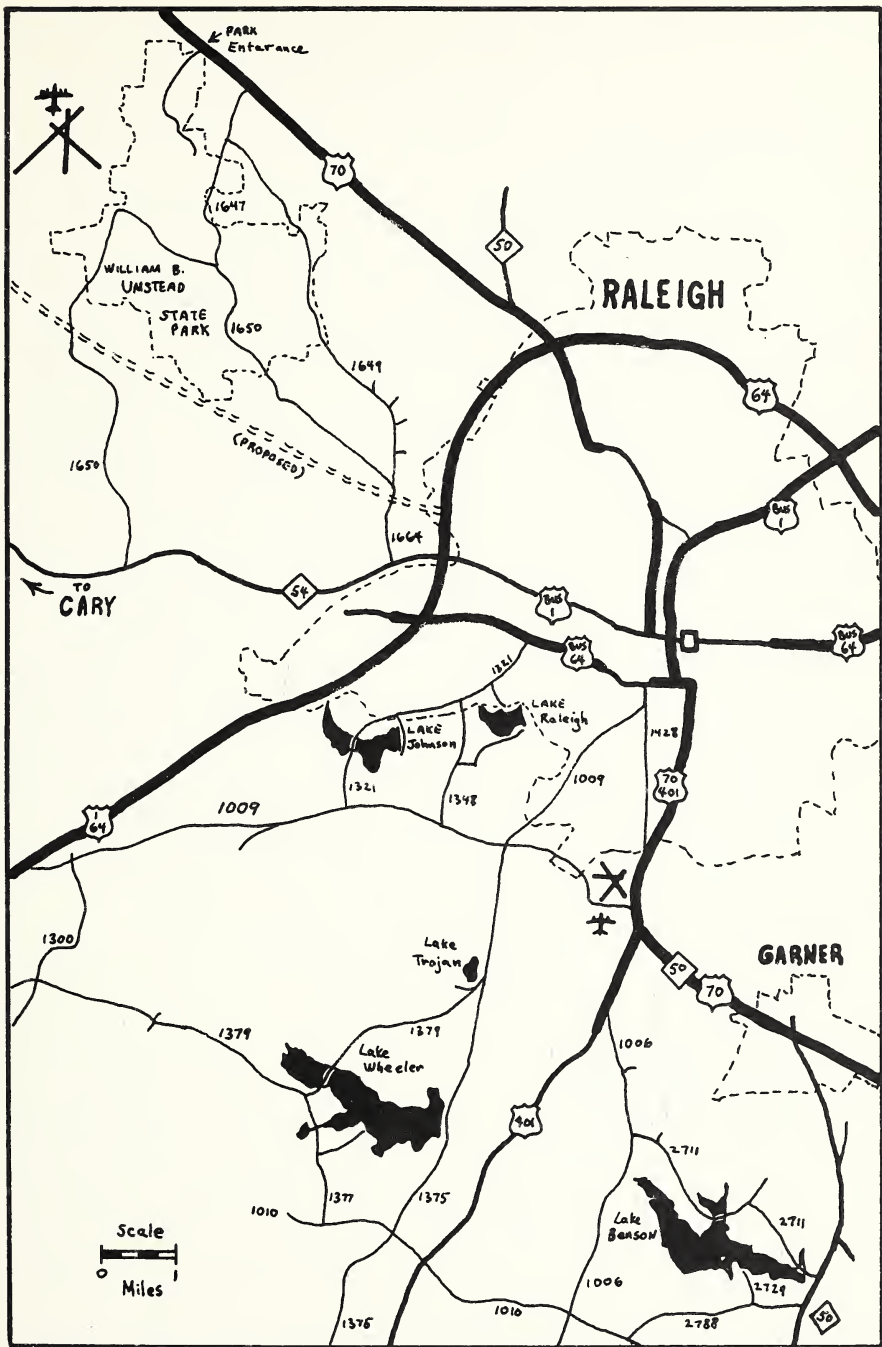
The Raleigh region, in the center of Wake County, is in the lower Piedmont bordering the Coastal Plain. The most accessible and fruitful birding places are within a few miles of the southern limits of the city, mainly around and between the four reservoir lakes -- Raleigh and Johnson on Walnut Creek, and Wheeler and Benson on Swift Creek (see map and descriptions below). Much of C.S. Brimley's original work published in *The Birds of North Carolina* and most of the studies forming the basis of R.J. Hader's "Species List of Birds of Wake County, N.C." (present issue of *The Chat*), were done in this diverse habitat of farms, woodlands, streams, ponds, and lakes just south of Raleigh. Umstead Park, on the west, has been added to the prime study region in more recent years. The Neuse River, 7 miles east of Raleigh, receives less attention partly because it is somewhat less accessible to most Raleigh birders and also because of increased litter and pollution. The Wendell-Zebulon region, about 20 miles east of Raleigh around U.S. 64 and Little River, is an excellent birding area, with a great diversity and richness of stream bottoms, farm and mill ponds, open and woodland marshes and swamps, and varied farmlands; nesting Wood Ducks are abundant, as are wintering Black Ducks and Mallards, and Woodcock and Pileated Woodpeckers are more common here than in any other part of the county. Six good birding locations in the Raleigh region are described below with some indications of the kinds of birds to be expected at each site.

Lake Raleigh is an 80-acre reservoir close to the city, but protected from urban encroachment by Dorothea Dix Hospital farm lands surrounding the south shore and about half of the north shore. The upper end of the lake is bordered by willow thickets, pine woods, and mixed hardwood swamp. Hunting, fishing, boating, and swimming are prohibited. To reach Lake Raleigh take Western Boulevard to Avent Ferry Rd., then 0.5 mile on Avent Ferry to Lake Raleigh Rd., then another 0.5 mile on Lake Raleigh Rd. (unpaved). Park in the open area near the first sharp turn to the left. Continue on foot along the same road which follows the northeast shore. Birds to be expected are open field species e.g. sparrows, Meadowlarks, Bobolinks, Indigo Buntings, Blue Grosbeaks, blackbirds, Orchard Orioles, hawks, the warblers commonly found in more open habitat and, on the lake itself, waterfowl during the winter months. Waterfowl, however, are best observed from the south shore. To reach the best vantage point on the south shore, return to Avent Ferry Rd. and continue 0.7 mile to Trailwood Dr. (State Rd. 1348). Turn left and follow Trailwood 0.9 mile to Tanager St. (State Rd. 1449). Turn left on Tanager, then almost immediately left again on an unpaved State Hospital farm road (no signs). Follow this road for 0.7 mile to the beginning of pine woods on the right. Park here and walk about 500 feet farther. Then walk through the woods on the left (a somewhat obscure trail exists) to a bluff from which the entire lake may be scanned with binoculars or scope. Waterfowl to be expected are Ring-necked Ducks, Scaup, Ruddy's, Mallards, Blacks, Gadwalls, Widgeons, Blue-winged and Green-winged Teal, Wood Ducks, Hooded Mergansers, and several other species somewhat less commonly.

In late summer and early fall good shorebird habitat may develop if the water level drops sufficiently. The best mudflats surround the upper end of the lake. A walk along these flats should start from the Lake Raleigh Rd. location and proceed along the northwestern side.

The mixed hardwood swamp at the head of the lake is excellent for spring warblers but is somewhat more difficult to reach.

Lake Johnson is a 175-acre reservoir reached by driving 2.8 miles along Avent Ferry Rd. starting at Western Boulevard. Park at the boat house. Barn Swallows nest here and



Rough-winged Swallows nest in holes under the bridge nearby. A bridle path along the north shore can be followed for about half a mile in either direction. In the pine woods along this path will be found Pine Warblers, Yellow-throated Warblers, nuthatches, and woodpeckers. Along the edge are sparrows, kinglets, Catbirds, and warblers. In winter the waterfowl species are generally the same as those found on Lake Raleigh. Shorebird mudflats develop in late summer and fall, particularly in the upper end of the lake on the northwest side of the causeway. These flats are easily accessible from the boathouse area. In addition to shorebirds, long-legged waders are fairly common.

A short distance across the causeway is a parking lot for the Lake Johnson nature trail. This trail runs through pine and mixed hardwoods on the southwest side of the lake and leads to a picnic shelter overlooking a substantial part of the lake.

Lake Wheeler, located about 7 miles southwest of Raleigh, is the largest (540 acres) of the city's reservoirs. Regular visits to this area will, over the course of a year, produce more species than any other location in Wake County. Starting at South Saunders St. drive 4.6 miles on Lake Wheeler Rd. (State Rd. 1371), then turn right on State Rd. 1379 and continue for 2.4 miles to the causeway crossing the upper end of the lake. The causeway and the high banks just beyond provide an excellent viewing point for waterfowl. Diving ducks, Horned Grebes, and the larger mergansers are seen primarily in the larger, deeper portion of the lake. Surface feeding ducks, Hooded Mergansers, Pied-billed Grebes, and Coots are seen on both sides of the causeway, but are somewhat more common in the upper end of the lake which is comparatively shallow. If the water level drops sufficiently -- as it often does in late summer and in fall -- then some 15 or more species of shorebirds may be found on extensive mudflats. The same habitat attracts pipits and long-legged waders. Several species of gulls and terns visit the lake and are most readily seen from the causeway. Barn Swallows nest under the bridge and other swallow species concentrate here in good numbers during spring and fall migration. Ospreys are seen regularly in migration and a Bald Eagle has been reported several times in recent years. A marsh at the extreme upper end of the lake has breeding Least Bitterns and King Rails and, during migrations, harbors numerous other marsh species. The marsh could be visited by boat (available for rent near causeway) or by walking along a path on the east side of the lake and then wading through water and marsh grass.

From the east end of the causeway continue 0.5 miles on State Rd. 1379 to Greenview Dairy Farm. Turn left on State Rd. 1377 (unpaved) and drive 0.3 miles down hill to a pasture gate. The large pasture lands on both sides are excellent for open field birds and the pond on the right often has good numbers of surface-feeding ducks, particularly Mallards, Widgeons, Green-winged Teal, Blue-winged Teal, and Gadwalls. In wet areas beyond the pond, long-legged waders, rails, and several species of shorebirds are found commonly in the appropriate season.

Continue on State Rd. 1377 for 0.4 miles beyond the pasture gate, then turn left on State Rd. 1378 (still unpaved) which dead-ends after 0.8 miles. From the dead-end point walk three or four minutes along a path to the south shore of Lake Wheeler. From this point the lower part of the lake (from 1 to 1.5 miles from the causeway) can be inspected. Turning back from the dead end of State Rd. 1378 about 0.1 mile on the right a trail leads through pine woods and mixed hardwood to another vantage point on the lake shore. This point is particularly good for viewing the middle part of the lake.

Lake Benson, located some 7 or 8 miles directly south of the city, is only slightly smaller than Lake Wheeler. It attracts the same species of waterfowl, long-legged waders, some shorebirds, gulls, Osprey, etc. Compared with Lake Wheeler it suffers somewhat from a lack of easily accessible vantage points. One area of exceptional interest, however, is the mixed hardwood swamp where Swift Creek enters Lake Benson. This area is outstanding for warblers (including, for example, breeding Prothonotaries). Other attractions are vireos, flycatchers, thrushes, woodpeckers (including an occasional Pileated Woodpecker), Red-shouldered Hawk, owls, and Wood Ducks. To reach this area follow US 401 for 4.3 miles starting near the Memorial Auditorium. Turn left on the Old Stage Road (State Rd. 1006). (Note that this will be 1.2 miles beyond where US 401 leaves US 70). Follow Old Stage Road 2.2 miles to the bridge crossing Swift Creek. Park

about 1,000 feet beyond the bridge. Good birding is available from the road, and paths may be followed a short distance into the swamp on either side with no difficulty. On the left side, the shallow upper end of the lake may be reached in 10 or 15 minutes; however, after the first 5 minutes there is no clear, easy trail.

Leaving the Swift Creek bridge, return 0.5 miles on Old Stage Rd. to State Rd. 2711. Turn right and follow 2711 for 1.7 miles to a boathouse and bridge. From this point one may view a good part of the middle of the lake on the right and also a small partially isolated section on the left. Barn Swallows nest under the bridge at this location.

Hemlock Bluffs, though somewhat more distant from Raleigh, is an outstanding area for migrating warblers and other woodland species, particularly in the spring. It may be reached by taking US 1 and US 64 west for 6.5 miles beyond Western Boulevard. At this point leave the divided highway as though following US 64 but turn left, passing under US 1, then almost immediately turn right on State Rd. 1009. Follow 1009 for 0.7 mile, then turn right on State Rd. 1300 (unpaved) and continue for 1.1 miles to a bridge over Swift Creek. The area along the stream on either side of the bridge is ideal for spring warblers.

Continue 0.4 mile along State Rd. 1300 to a rough dirt road bordering an open field on the right. A 10-minute walk along this road and into the woods beyond leads to a small stand of hemlocks located on steep bluffs overlooking the stream. Even apart from the fine birding available here, the scenic beauty of this spot makes the trip worthwhile.

Returning to State Rd. 1300 continue 0.6 miles to State Rd. 1379. Turn left on 1379 to reach Greenview Farm and Lake Wheeler by driving approximately 4 miles. At the peak of the spring migration it is not difficult to list over 100 species by spending the first few hours of the day at Hemlock Bluffs and then continuing on to Lake Wheeler for the remainder of the day.

Umstead State Park is the most extensive stand of second-growth forest in the region. Now composed of mixed upland pine hardwoods and stream-bottom wet woodlands, Umstead has been undisturbed since establishment in the mid-1930s. Drive west toward Durham from the Raleigh beltline for about 6 miles on US 70, turn left at the Park Headquarters entrance, and go 1.6 miles to the dead-end parking and picnic area, between Boathouse and Sycamore lakes (55 and 25 acres, respectively). Sal's Branch and Sycamore hiking trails begin at the picnic area and lead along the lakes and through the woods. Hiking and birding trails thread the entire Park, especially along Crabtree, Sycamore, and Reedy creeks. A map of the Park showing all trails can be obtained at the Park Headquarters. Overnight camping facilities are available. Umstead had a rich woodland birdlife, with the most distinctive species being the wild Turkeys.

North Carolina State University, Raleigh, N.C.



Conservation

... with Marie Mellinger



AUTUMN THOUGHTS

An item in the *Anderson Independent* (19 June 1969) tells of thousands of Greater Shearwaters dying along the North Carolina coast. No one is quite sure why, but it is sure that man's continuing stupidity is some how back of the bird kill. It is part of the seasonal melancholy, that autumn marked the passing of the last Heath Hen (in captivity), and that 1 September is the anniversary of the day the last Passenger Pigeon (in the Cincinnati Zoo) became extinct in 1914. Possibly autumn hunts were also responsible for the passing of the Carolina Parakeets. Watching a Red-tailed Hawk soaring and banking in majestic circles above a mountain-top, one wonders how much longer we will be able to see a hawk, or an eagle, or an Osprey, or whether future generations will even be concerned about their extinction.

Robert Latham, in the *Pittsburg Press*, wrote, "More and more I begin to think that when the butterflies are no more, when there is no longer a chant of the katydid at night, and a sweet song of the warbler at dawn, when the inspiring sounds of nature are replaced by the ugly discordance of human violence, when the green vistas of the countryside are totally hidden by billboards and buildings, life on this toxic, psychopathic world may be hardly worthwhile."

Along this same theme, the spring issue, 1969, of *Foxfire* magazine had a feature article, "Where Have All the Flowers Gone?" [by Marie B. Mellinger - ED.].

The issue of the transmountain road across the Smoky Mountain Park is again pertinent. The Carolina Mountain Club of Asheville, N.C. arranged transportation for a meeting in Washington on 23 June for a meeting with secretary of the Interior, Walter J. Hickel, to again protest against the building of such road. A decision has been promised soon.

Among the most hopeful trends are those against the continued use of DDT and other pesticides. The Louisville, Kentucky, Audubon Society drew up resolutions and sent them to Governor Louie B. Nunn urging him to ban use and sale of persistent pesticides in Kentucky. Other local and state bird groups might well follow this example.

Beginning 1 January 1970 Sweden will ban all use of DDT for 2 years, and use of Aldrin and Dieldrin will be permanently forbidden.

Conservation News (15 July 1969) in a front page item dedicated simply "to Rachel" stated, "The United States Department of Agriculture has ordered the Forest Service and

the Agricultural Research Service to stop using DDT, Dieldrin, Endrin, Aldrin, Chlordane, Toxaphene, Heptachlor, and BHC, pending a review of Department's pest control programs to be completed within 30 days." We hope they will make it permanent!

The need for Conservation becomes a personal thing when the individual loses something close to him or her. With us, it is the rapid cutting and developing of the forested areas surrounding us. We seem to never be free of the sound of saws and bulldozers. Thus we feel it of vital importance to put the Chattooga River under the National Wild and Scenic Rivers Act, and to preserve the forests along its banks. The National Forest Researchers are doing a complete study of the Chattooga River area, and we are privileged to have a chance to work with this team.

Every citizen should take a good look at pages 22-23 of *Life* for 29 August 1969, a visual indictment of all of us, and a focus for a growing problem. Murray J. Brown, in the *Atlanta Constitution*, wrote, "Americans dump 40 million tons of litter on our highways, byways, parks, beaches, and natural areas, annually, enough to completely cover a highway from New York to San Francisco." Do you have a litterbug in your family?

I would nominate for the Cartoon of the Year one by Bob Weber:

"Would you like to give to the World Wildlife Fund?"

"Are they saving the turtle from extinction?"

"Yes, sir."

"That's good news, I'd hate to be without turtle soup."

And finally, a few personal observations. The Charleston lady at Dry Falls, N.C., digging up ferns in the park, should know better. But, hopefully, we also saw a car with a South Carolina license plate, a man driver, carefully swerving to avoid hitting a turtle in the road. And some 50 people saw a snake on a Vogel Trail trip, and not one suggested killing it. After a summer spent in State Parks, I think Conservation is beginning to catch on.

CORRECTION

The table below was inadvertently omitted from "Winter Finch Influx—1968-1969" by Robert P. Teulings which appeared in *Chat*, 33:38-41, June 1969. The Editor apologizes to the author and regrets the inconvenience to the readers.

TABLE 1. *Christmas Count totals for Evening Grosbeaks, Purple Finches and Pine Siskins for peak years in the Carolinas since 1961.*

	1961	1963	1965	1967	1968
Observers/Parties	283/108	286/100	400/131	435/159	398/151
Evening Grosbeaks	134	284	840	12	1946
Purple Finches	410	863	1889	1309	1551
Pine Siskins	118	3348	5766	87	1869
Totals	662	4495	8495	1408	5366

General Field Notes

James F. Parnell

Blue Jay Banded in New Jersey and Recovered Twice in Wake County, N. C.

ELOISE F. POTTER
P.O. Box 277, Zebulon, N.C.

T. DONALD CARTER
Kinnelon Road, Kinnelon, N.J.

11 October 1968

According to the 1957 AOU *Check-list*, *Cyanocitta cristata cristata* is the subspecies of the Blue Jay breeding in North Carolina, while *C.c. bromia* is the northern form breeding in New Jersey. *C.c. bromia* is to some extent migratory and is known to winter southward to southern Louisiana, central Alabama, and northeastern Georgia. There are banding records (Bent, 1946, *Life Histories of North American Jays, Crows, and Titmice*, p. 52) showing definite fall migration from New Jersey to Virginia, North Carolina, and South Carolina. *South Carolina Bird Life* (1949, p. 368) lists the northern form as a rare winter resident in January and February, "potentially throughout the State." *Birds of North Carolina* (1959, p. 252) states that the northern form of the Blue Jay "may winter generally in the State," but there is no indication of arrival and departure dates.

In early December 1966 the Potters noted a banded Blue Jay in the yard of their home 3.5 miles N of Zebulon, Wake County, N.C. This was only 3 months after they moved into the new house and prior to any banding at that station. Attempts to trap the banded bird were unsuccessful, so in March 1967 Mrs. Potter began trying to read the band number through a 30X Balscope. On 11 April she determined it to be USF&WS #813-28313. This band had been placed on an immature Blue Jay by T. Donald Carter at his home in Kinnelon, Morris County, N.J., on 23 July 1964. It was one of 23 immature Blue Jays that Dr. Carter banded between 11 July and 27 August 1964 after they had entered his waterfowl traps. #813-28313 repeated on 24 and 26 July 1964, but has never been trapped by Dr. Carter as an adult bird. Thus the bird is known to have spent the third winter of its life near Zebulon.

In the fall of 1967 Mrs. Potter banded several Blue Jays in her yard, but she did no more banding until the fall of 1968; therefore, she does not know whether #813-28313 was among the banded birds at her feeder during the winter of 1967-1968. On 9 October 1968 Mrs. Potter netted #813-28313. It had apparently returned to spend the fifth winter of its life near Zebulon.

The bird banded by Dr. Carter is not thought to be the only northern Blue Jay to have visited the Potters' yard. On 9 October 1967 Mrs. Potter netted a Blue Jay that seemed considerably larger than others she had banded. The unflattened wing measured 135 mm, a length deemed adequate for classifying the bird as *C.c. bromia* (Mengel, 1965, *Birds of Kentucky*, p. 330-331). The jay was in very poor condition with the sternum protruding sharply, as is frequently seen in newly arrived migrants. When #813-28313 was netted on 9 October 1968, it was apparently well fed, indicating it may have arrived several days earlier. The wing measured 138 mm.

In the spring of 1966 Mrs. Potter had an opportunity to observe the behavior of #813-28313 while trying to read the band number. The bird had been ex-

tremely wary all winter, snatching food from the feeder and flying away to eat it. Often the bird would not be seen for several days at a time if there was much activity in the yard. However, during the second week of April the jay began remaining at the feeder to eat, was not easily frightened away, and returned quickly after having been disturbed. It consumed large quantities of sunflower seeds, apparently in preparation for the northward migration. On 10 April the banded bird drove from the feeder two smaller Blue Jays (presumably *C.c. cristata*) that had been engaged in courtship feeding. The banded jay was not seen after 13 April 1967 until it reappeared in the fall of 1968.

On the basis of these two Wake County recoveries of a single Blue Jay that had been banded as an immature bird in New Jersey, it is now known that individuals of the northern race of the Blue Jay (*C.c. bromia*) arrive in North Carolina as early as 9 October and remain as late as 13 April, with some birds returning to exactly the same localities visited in previous winters.

Avian Commensal Adaptations to Human Machines

MARCUS B. SIMPSON JR.
210 Ridgeway Avenue
Statesville, N.C.

20 August 1968

Rothschild and Clay (*Fleas, Flukes, and Cuckoos*, 1952) define *commensalism* as a relationship in which "two animals live in close and harmless association with one another, from which circumstances only one partner derives benefit." Perhaps the best known example of this relationship in our area involves the association between herds of domestic cattle and flocks of Brown-headed Cowbirds (*Molothrus ater*) and Cattle Egrets (*Bubulcus ibis*). These two species of birds follow closely about the feet of cattle as they forage in pastures; and when the movement of the beasts disturbs insects in the vegetation, the birds are ready to make a quick meal of the escaping arthropods. The Cattle Egret occasionally transfers this habit to human farm machinery. North of Charleston, S.C., I have frequently seen large flocks accompanying plows and tractors across fields. A number of other species have developed a similar affinity for using various human machines, particularly lawn mowers and automobiles, to help in their foraging.

During 22 through 26 June 1968, while camping at Big Bend National Park in Texas, I noticed that several Cactus Wrens (*Campylorhynchus brunneicapillum*) regularly visited the grille of our car every morning to glean the harvest of insects which had collected there during the previous day's driving. This habit seems to be well established at Big Bend, for I saw these wrens fluttering around the grilles of a number of other cars; and several campers, seeing my binoculars, asked me what kind of bird was eating insects from the front of their automobiles. Here in North Carolina, I have also seen Mockingbirds (*Mimus polyglottos*), Carolina Wrens (*Thryothorus ludovicianus*), and House Wrens (*Troglodytes aedon*) engaging in similar behavior.

A more unlikely relationship exists between a number of suburban species and the gasoline powered lawn mower. The Eastern Wood Pewee (*Contopus virens*) and the Catbird (*Dumetella carolinensis*) frequently follow closely by our mower to capture insects, although the method of feeding is different for each species. The Wood Pewee moves about the yard from tree to tree, always keeping a perch as close to the moving machine as possible. From these high perches, they dive past the mower and snatch up any insects which have been disturbed by the air movements generated by the rotating blade. In this pursuit they are not shy, making better than 5 passes per minute and frequently coming within a foot of the machine. They never alight near the mower, but in typical flycatcher fashion they swoop past with deadly aim. Furthermore, the pewee appears to

recognize the sound of the lawn mower, for they invariably arrive on the scene as soon as the engine is started.

The Catbird, on the other hand, moves about on the ground close to the mower and catches insects which are disturbed by both the air movement and the physical motion of the machine. Unlike the pewee, they rarely catch insects on the wing but prefer to alight immediately in front of the mower, snatch up an escaping insect, and make a quick retreat from the oncoming machine. They will also follow close behind the mower for insects which were stunned by the blades; and if the machine is left idling, they will make use of the handle for a perch to scan the ground for action.

BOOK REVIEW

Fleas, Flukes, and Cuckoos—A Study of Bird Parasites

Miriam Rothschild and Theresa Clay. Collins, 14 St. James Place, London, 1952. \$6.00. 305 p. illus.

Avian parasitology is the most consistently and inexplicably ignored aspect of bird study in the United States today. Perhaps a part of this negligence is due to the unsavory and frequently repulsive nature of parasitic life. Most bird watchers are undoubtedly content to live in blissful ignorance of the fact that their fine feathered friends are "not only birds but aviating zoological gardens" as well. To a bird lover, there is something fundamentally disquieting about the discovery that virtually every species and every individual is likely to be afflicted by fleas, lice, mites, flies, tongue-worms, mosquitoes, midges, leeches, ticks, protozoans, malaria, roundworms, tapeworms, and flukes. Yet the intellectual challenge of a wide-open field and the intricately complex relationships which have been discovered should be stimulating enough to greatly outweigh any emotional repugnance toward the subject. Furthermore, the continued neglect of this field is inexcusable in light of recent discoveries regarding the role of avian parasites in the life cycles of malaria, encephalitis, and numerous other diseases which afflict human populations.

The value of *Fleas, Flukes, and Cuckoos* becomes readily apparent to anyone who attempts to locate materials on this fascinating field: there is scarcely a footnote on avian parasitology in any ornithological textbook printed in English, and the rather meager literature of papers is literally scattered unto the corners of the earth. Thus Rothschild and Clay's work provides a long needed synthesis and an indispensable volume for this neglected field.

The authors devote three chapters to a general discussion of parasitism, commensalism, and symbiosis, with a detailed definition and a fascinating array of examples of each relationship as it occurs in birds. The paraquet which always nests in the heart of an inhabited termite colony, the famous sandpiper of Herodotus which eats the leeches from the gums of the crocodile, the oriole which always nests in contact with a hornet colony, the ox-peckers which obtain all their food from the bodies of large mammals, and the grey phalarope which alights on the backs of whales to devour their ecto-parasites are among the many intriguing examples contained in these chapters. This is followed by chapters dealing with the effect of parasites on the host, the effect of parasitism on the parasite, the origins of parasitism, and the evolution of parasites. For example, it is known that the feather lice (*Mallophaga*) have evolved almost simultaneously with the class Aves; and due to their high degree of host specificity, the phylogeny of these lice is of tremendous value in determining the authenticity of proposed evolutionary relationships among their avian hosts.

The rest of the book is devoted to the specific groups of parasitic organisms which infect birds. Nearly half of this portion of the work is devoted to highly

detailed and documented accounts of the fleas and feather lice, with attention given to their structure, life history, habits, distribution, origins, evolution, classification, effects upon the host, and the phylogeny of host and parasite. This is followed by eight chapters dealing with protozoa, worms, flies, mites, micro-parasites, the fauna of birds' nests, skuas, and brood parasitism. The book is illustrated with 99 photographs, 30 drawings and diagrams, and 4 maps to clarify the variety of subject matter dealt with in the text, while the bibliography contains over 200 references arranged according to their content. The only drawbacks to the work are the lack of instructions on study and collecting techniques and the fact that the book unavoidably tends to be slanted toward British and European fauna.

Nevertheless, with its clarity of style, breadth of subject matter, and extensive bibliography, *Fleas, Flukes, and Cuckoos* represents the definitive work on avian parasitology, a field with which more ornithologists, both amateur and professional, should be acquainted.—MARK SIMPSON JR.

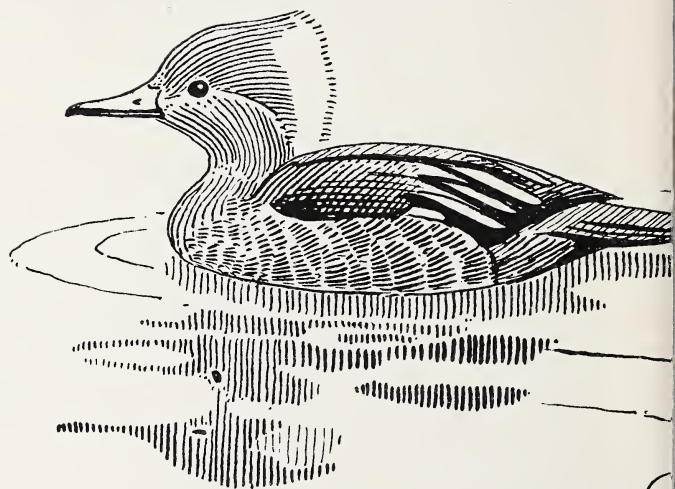


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The Chat

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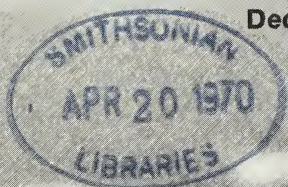
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OUR COVER—A Herring Gull stands sentinel at Oregon Inlet in the Cape Hatteras National Seashore. (Photo by Jack Dermid)

BREEDING BIRDS OF WILLISTON BAY

WILLIAM POST

During the summer of 1965, I studied the breeding population of a Carolina bay located 4.2 miles SE of Williston, Barnwell County, S.C., at the intersection of state highway 37 and county road S-6-113. The size of the Carolina bay is about 95 acres. The census area was 62 acres, divided by corner markers into 1-acre plots.

A detailed discussion of Carolina bays is given in Kelley and Batson (1955). Three Carolina bays were censused by Robert A. Norris (1957). These three are within 20 miles of the Williston bay, but appear to differ from it in that their vegetational succession is more advanced. This is because the Williston bay had been nearly dry and a large part of it cultivated. Because of heavy summer rainfall in 1964-1965, the Williston bay had a water area of about 90 acres, with a greatest depth of 50 inches.

The Williston bay is an elliptical crater, the long axis in the NW-SE direction. It has a regular bottom. The northwestern side is rimmed by a ridge 35 feet above water level. Heavy rains had reclaimed about 15 acres of old field, with its pine, blackberry (*Rubus* sp.), broom sedge (*Andropogon* sp.), and dog-fennel (*Eupatorium capillifolium*), vegetation that fringes the entire bay. The study area did not include the edge.

The principal vegetation in the marsh was maidencane (*Panicum* sp.), averaging 30 inches, reaching a height of 80 inches in deep water, and thickening in shallow water. Submerged dikes and roads (from periods of cultivation) were more heavily lined by *Panicum*, affording good nesting sites. Other vegetation was smartweed (*Polygonum* sp.), redroot (*Lacnanthes caroliniana*), milkwort (*Polygala* sp.), pondweed (*Potamogeton* sp.), bladderwort (*Utricularia* sp.), buttonweed (*Diodia virginiana*), and false loosestrife (*Ludwigia* sp.). Thirteen acres of the study area were open water.

The dates of my visits were 22, 26, 27, 29, and 31 May; 2 June; and 4 July. Censusing was done by mapping the locations of all birds and nests (Williams, 1936). Total hours of actual census were 31.

BREEDING BIRDS (in order of density):

1. Pied-billed Grebe (*Podilymbus podiceps*). 11 pairs (18 pairs per 100 acres). Ten pairs of grebes had hatched young by 2 June. A total of 31 young (48 young per 100 acres) were raised, making an average brood of three. Fish Crows (*Corvus ossifragus*) seemed to be the main enemies of Pied-billed Grebes. On 29 May I disturbed a group of 2 adult and 3 young grebes. The adults reacted by scolding with "grunts" as they kicked up water, dove, and pattered over the water. The young scattered and dove. After I withdrew, the young rejoined the adults; but a minute later, a Fish Crow made three passes over the same group, and they repeated the same evasive tactics.

Adults and young grebes called constantly, the young "peeping" and the adults "tooting." Young about 2 weeks old swam by themselves but kept up their peeping. An early nesting season was indicated by the presence of large young on 22 May.

2. Red-winged Blackbird (*Agelaius phoeniceus*). 8 pairs (13 per 100 acres). From 22 May to 2 June eight active nests were located, with 1 to 4 eggs. Three nests were known destroyed. No young were seen in the area. Nesting sites were located in thick patches of *Panicum*.

3. American Coot (*Fulica americana*). 3 pairs (5 per 100 acres). Coots appear to be late nesters in this area. Several practice nests were found on 31 May, but on 4 July there were still no eggs, although the birds showed definite territoriality by sticking close to the area and scolding constantly when I approached. Similarly, in 1961, I found a coot nest containing 2 eggs that did not hatch until 26 July. There were three apparently unmated coots in the area. The Williston bay is the second known nesting site of the coot in South Carolina (Post, 1961).

4. Least Bittern (*Ixobrychus exilis*). 2 pairs (3 per 100 acres). Although no nests were found, four birds were present every trip in some dense patches of *Panicum*. *Odonata*

were plentiful in the bay and were probably the main food of this species.

5. King Rail (*Rallus elegans*). 2 pairs (3 per 100 acres). The King Rails depended on the edge of the marsh for feeding and nesting. A nest containing 8 eggs on 29 May had 10 eggs on 2 June. It was placed in a clump of *Panicum*, 10 inches above water 8 inches deep. There was no runway leading up to the nest. The incubating bird stuck close to the nest until I was about 5 feet away.

6. Common Gallinule (*Gallinula chloropus*). 2 pairs (3 per 100 acres). Two individuals of this late nesting species were courting on 31 May. The birds swam around each other, raising their tails to display the white undertail coverts, bobbing and stretching their heads forward, and calling all the while. Two nests were found on 4 July with 2 and 4 eggs.

7. Mallard (*Anas platyrhynchos*). A female with three small young was flushed from the edge of the bay on 27 May. On 4 July, one chick was left. This appears to be the first breeding record for Barnwell County (Post, 1968), although John B. Hatcher had previously found a Mallard nest in Aiken County (Norris, 1963).

VISITORS (average no. per trip)

Common Grackle, 10; Mallard, 8; Eastern Kingbird, 6; Wood Duck, 3; Fish Crow, 5; Green Heron, 1; American Woodcock, 1; Purple Gallinule, 1.

TOTAL BREEDING PAIRS: 29 (47 per 100 acres).

POSTSCRIPT: In 1969, I visited the Williston bay and found it bisected by an immense drainage ditch. The northern half was planted in soy beans.

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THE ROSEATE TERN IN THE CAROLINAS

BRUCE A. MACK

On 28 April 1968 I saw, on a piling of a dock in the Intracoastal Waterway at Isle of Palms, S.C., a tern that proved upon closer examination to exhibit the characteristics of the Roseate Tern (*Sterna dougallii*). During about 20 minutes of observation at ranges from 25 to 40 yards with 7X binocular and 30X Balscope, I noted clearly the following features which, taken collectively, conclusively identify the bird as a Roseate Tern: mantle silvery-gray, primaries somewhat lighter, appearing white-edged; outer rectrices extending about 1.5 inches beyond folded wing; bill and feet approximately as in the Common Tern (*S. hirundo*), basal 40 to 50% of bill reddish-orange; in flight, tail and upper tail coverts completely white, with no gray or dusky anywhere; voice when pursuing a passing Common Tern low-pitched and grating ("craaack, craaack"). A brief survey of the published accounts of observations of this species in North and South Carolina suggested that a review of its status was in order.

As indicated in Table 1, there have been at least 10 records for North Carolina and at least 8 for South Carolina. The North Carolina records are concentrated in the fall, only the anomalous specimen record of 20 January 1937 and the sight record of 23 May 1958 falling outside the fall migration period. For South Carolina, the reverse is true: all records are for the spring months with the exception of one on 28 July 1940 and a vague reference to the species' having been taken near Charleston in October. As to frequency of occurrence, it will be noted that the most recent North Carolina record on 23 May 1958, itself over 11 years old, followed a period of over 18 years during which no Roseate Terns were reported in the state. Nineteen years of no observations intervened before the most recent South Carolina record on 28 April 1968. Pearson, Brimley, and Brimley (1942) describe the Roseate Tern as "apparently only occasional" in North Carolina, and Sprunt and Chamberlain (1949) call it a "rare transient" in South Carolina. On the basis of the published records here reviewed, this species can surely be termed no more than casual in the Carolinas at the present time.

To the north of the Carolinas, the Roseate Tern breeds from Nova Scotia locally southward to Long Island (Bent, 1921) or Virginia (A.O.U. *Check-list*, 1957); the latest published record of breeding in Virginia is for 1927 (Kuerzi, 1929). Since the winter range lies from the Bahama Islands generally southward, it would seem reasonable to expect the bird to be reported with some regularity along the Carolina coasts. There is in fact very little information of any kind on the migrations of this species beyond dates of arrival at or departure from known breeding grounds. The consensus is that migratory flights pass well off-shore, but evidence for this assumption is largely circumstantial: it is not being reported on-shore, and it must be somewhere. This off-shore migration is well-attested for the Arctic Tern (*S. paradisaea*), but another factor may contribute to the paucity of coastal records of the Roseate south of its breeding range, namely the greater difficulty of distinguishing it in the field from closely related species. While certainly distinctive enough when seen well at close range, the Roseate can, much more readily than the Arctic, be confused either with the Common Tern or with Forster's Tern (*S. forsteri*). It might be well at this time to review and evaluate the diagnostic characters of the Roseate Tern. The following is summarized from Bent (1921) and four field guides in general use (Bond, 1961; Peterson, 1947; Pough, 1951; Robbins, Bruun, and Zim, 1966).

In general appearance the Roseate is an extremely pale tern with a long streaming tail and notably buoyant flight. These features, however, are so imprecise and relative as to be of little use in the field beyond perhaps attracting the closer attention of the observer. The rosy suffusion of the underparts in some individuals is equally unreliable: its absence proves nothing. Under good conditions the primaries, tail, and bill of the Roseate present points of difference from the Common or Forster's Tern or both. The primaries of the Roseate are paler than the mantle (darker in Common; paler in Forster's). Its tail is completely white (white, outer web of outermost rectrices dusky in Common; gray,

TABLE 1. *Published records of Roseate Terns occurring in North and South Carolina, listed chronologically.*

Date	Location	No. birds	Comments	Reference*
14 May 1870	Helena Sound, S.C.	1	Sight record	SCBL
22 August 1904	Pea Island, N.C.	1	Collected	BNC
? October, before 1910	near Charleston, S.C.	?	Collected	SCBL
19 April 1934	off Dewees, S.C.	3	Sight record	SCBL
20 January 1937	Cape Hatteras, N.C.	1	Collected	BNC
29-30 March 1937	Cape Romain, S.C.	1	Sight record	SCBL
4 July 1938	?, N.C.	?	Sight record	Chat, 4:3
7 July 1938	?, N.C.	?	Sight record	Chat, 4:3
26 August 1938	?, N.C.	?	Sight record	Chat, 4:3
8 September 1938	?, N.C.	?	Sight record	Chat, 4:3
17 August 1939	Oregon Inlet, N.C.	1	Collected	BNC
18 August 1939	Oregon Inlet, N.C.	1	Collected	BNC
28 August-8 September 1939	Pea Island, N.C.	"fairly common"	Sight record	Chat, 4:4
16 April 1940	Horry County, S.C.	1	Sight record	SCBL
28 July 1940	Horry County, S.C.	1	Sight record	SCBL
5 April 1948	Bull's Island, S.C.	1	Sight record	SCBL
23 May 1958	near Southport, N.C.	1	Sight record	AFN, 12:343
28 April 1968	Isle of Palms, S.C.	1	Sight record	present paper

**South Carolina Bird Life* (SCBL); *Birds of North Carolina* (BNC); *Audubon Field Notes* (AFN)

inner web of outermost rectrices dusky in Forster's) and extends well beyond the folded wing (shorter than folded wing in Common; not markedly longer in Forster's). The bill of the Roseate is black, sometimes with varying amounts of red basally (red with black tip in Common; orange with black tip in Forster's). The voice of the Roseate is quite different from that of the other two species. Two distinctive calls are described, a loud, low-pitched, rasping "kraak" like the sound of tearing cloth, and a mellow two-noted "chivy" or "kulick" suggestive of the note of the Semipalmated Plover (*Charadrius semipalmatus*).

Bill color in the Roseate Tern has been recognized by all writers as being somewhat variable, but Donaldson (1968) gives the first detailed information as to the nature and extent of this variation. To summarize Donaldson's article briefly, she found, in studying Roseate Terns nesting on Great Gull Island, New York, that the bill remains all black until the tern has eggs, at which time red begins to appear on the soft parts around the rictus. From there the red spreads outward, reaching a measured maximum extent of half the length of the culmen, and a field-observed maximum of two-thirds the length of the culmen. Later in the season the bill begins to return to all black, not by spread, but by gradual suffusion over the whole red area. There is some evidence that this return to an all black bill begins only when the tern no longer has non-flying young. The red coloration may vary from pale to bright and from orange-red to blood-red.

These facts, if valid for all nesting populations of the species, have interesting ramifications for the Carolinas. To the south the Roseate Tern is not known ever to have nested closer than the Florida Keys. Individuals seen in the Carolinas ought then, with the always possible exception of storm-blown strays, to be migrating to or from more northerly breeding grounds. In the spring their bills should be entirely black; in the fall varying amounts of red should be expected. Spring or early summer birds with partially red bills should suggest at least the possibility of local breeding—certainly a not inconceivable eventuality in light of the disruptive distribution of the species and the marked fluctuations in its occurrence and abundance at known breeding sites. As will be noted from Table 1, there are no spring specimens from the Carolinas, and previously published sight records have made no mention of bill color. There thus exists as yet no real basis for testing the implications of Donaldson's article in the Carolinas.

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2340 Park Street, Columbia, S.C. 29201, 14 October 1969

Carolina Birds and Birders

. . . with Willie Morrison

BIRDING AT BEAUMONT

ANNIE R. FAVER

Many, many years ago the area between the Congaree and Wateree rivers in central South Carolina was designated on the old maps as "Indian Hunting Ground." The broad swamps were practically impregnable and with their huge trees and an understory of a tangle of berry-bearing shrubs, vines and smaller trees were natural sanctuaries for all kinds of animal and plant life. Between these swamps are higher, sandy, drier hills, dotted with many springs of clear cool water. These hills were covered with immense long-leaved pines, under which were nut-bearing hickories and oaks, dogwoods and many shrubs and vines. Some plants were native to the higher dry ridges, while others were abundant along the springs and creeks, which creeks finally found their way to one river or the other. I believe as game and birds followed these waterways to the rivers, so they also used these damper woods as paths out to the higher ground. Thus it happened that many birds and other wildlife came to live here at Beaumont.

There had been an old home here. The original deed said "that section of the Clarkson Place known as 'Beaumont'," which is a mile and a half north of Eastover on the Sumter Highway in Lower Richland County. We remodeled the old house. But the most important fact was not mentioned: that this site was on the western slope of a hill with a woods, spring, and large trees 70 feet from the back door. And it was and is a natural bird sanctuary. My curiosity was aroused by the many new birds that came by, for I had been raised in a dryer location, although only about a mile away, where practically the only warbler found was the Black-and-white or the Pine. In this suitable habitat at Beaumont I have identified 32 species of warblers during the past 30 years. Possibly there were others that I missed, for the migratory birds have been following this route for centuries and as long as the habitat remains suitable, will continue to do so.

As well as I remember, I believe the American Redstart was the first species that caused me to go to my father to borrow the bird books. Finally, he suggested that I just take the books to my home, since at that time birds new to me were appearing almost every day. With my small children and a neighbor friend and her mother we roamed the woods on this hillside, learning about the birds and wild flowers, shrubs and trees. While all phases of nature are interdependent, for me the interest in birds finally out-balanced the others, and I began keeping records and jotting down notes and descriptions of birds that I could not positively decide the identity of at that time. Also, since we could sit at our kitchen windows and see birds in the bushes and trees around the spring, I began to

wish for binoculars so I could plainly see the birds at that distance. Then feeders were set up, which brought even more birds, especially the Purple Finches and Evening Grosbeaks. However, the warblers will always be my special interest.

All the usual migratory warblers come through this section in spring and fall, and I will not take up the space to list them. However, occasionally there will be an unusual visitor, a species that does not normally pass through central South Carolina as the birds move north or south. There are several records of sightings of the Worm-eating Warbler, the Blue-winged and Golden-winged, the Tennessee, and the Wilson's. This latter species puzzled me for several years. I'd see this tiny bird, but usually just before a storm, when the tree limbs would be blowing so rapidly that no good look could be had at the bird. So records were marked with a question mark and not listed. It was not until a calm, clear day on September 4, 1967, that I was satisfied to classify the two birds in the back yard as immature Wilson's Warblers. This was the same day that another very odd bird was identified as a Sutton's Warbler (*Chat*, 32:47, 1968).

Incidentally, it pays to be a very close observer. When confronted by a small group of feeding birds, check each bird. Often an unusual visitor may be with a flock of immatures. Then again, if one bird is chasing another, find out what the bird is that is being run away. It could be something out of the ordinary. Usually immature warblers join up with young bluebirds, chickadees or kinglets, Downy Woodpeckers or titmice, Pine Warblers and nuthatches. These roam about the woods or visit our yards as they feed on insects and berries. In dry weather, many warblers may be attracted to the birdbath, especially if enticed by a dripping spigot or an Audubon "dripper."

But some warblers will not use a birdbath. Among these is the rare Kirtland's Warbler. This species seldom gets in the water, but baths by fluttering in dampened leaves. This information is from the book *The Kirtland's Warbler* by Harold Mayfield, who had worked closely with Dr. Van Tyne, prior to his death in 1957. After having identified this warbler on three occasions about the yard here at Beaumont, I secured this book and have collected any and all information available on the species. Other interesting facts are the statement that the bird is solitary in winter in low thick brush in the Bahama Islands and that it quickly disappears when aware that it is being observed. With this I can agree fully, for when I have seen the birds it has been through a window while indoors or when it did not see me and not while on a bird walk.

Another odd fact about the Kirtland's is that it does not stay about the swampy woods and yard. All my observations have been in the fall and usually fall migrants spend several days feeding about on this hillside. Twice I have seen a Kirtland's on the south side of the house, the first time in some plum trees (*Chat*, 13:79, 1949) and the second time near a fence in a clump of perennial sunflower plants (*Chat*, 15:83, 1951). Each time, the bird was feeding from the ground up into the low bushes, bobbing its tail and turning in every angle as it fed on insects of some sort, I could not see what. The last visit was one which appeared on the north side of the house by the birdbath. Against the evergreen foliage of the camellia and the elaeagnus the colors of the bird showed plainly in full sunlight. The gray back and the greenish-yellow breast, with black markings or streaks on back and sides, the divided white eye-ring of the gray head (fall birds are supposed to be browner) and the *gray* rump, together with the manner of the bird all combine to identify the Kirtland's Warbler. To me, it did not bob the tail like some species, but more like the Hermit Thrush, raised the tail with a sudden motion, then slowly let it fall. The almost lime-colored breast extends to the legs, then under the tail the coverts are white. This bird stayed in view long enough for me to get my copy of Mayfield's *The Kirtland's Warbler* and with the book on the table in front of me, study the bird through binoculars. Then it passed out of sight in the dense bushes of the woods. It has been quite wonderful to have the experience of seeing this warbler, and I always look for it each fall.

One possibility still eludes me: I'm still looking for a Cerulean! There's always hope here at Beaumont.



Conservation

. . . with Marie Mellinger

Environment and Extinction

One cannot pick up a magazine or a newspaper these days without a growing awareness of a much-used word, environment. Webster defines this as "all the conditions, circumstances, and influences surrounding and affecting the development of an organism, or group of organisms." When the word is used in regard to human beings, as it mostly is, the issue is more important than just saving a few birds or animals from extinction, it is preserving and maintaining an environment in which man can continue to exist. Man is getting choked in his own air pollution, deafened by man-made noises, his health contaminated by his use of pesticides, and he is getting covered up under the ever increasing burden of his own litter.

There is increasing awareness of these issues and problems. *Time Magazine* has begun a new section called "Environment" which emphasizes conservation. *Audubon Magazine*, always a strong voice for conservation, expresses the "Audubon View" and Charles Collison's "National Outlook," must-reading for concerned citizens.

The July issue of *Georgia Game and Fish* is entirely devoted to an article on "Our Ruined Rivers." Re water pollution, Senator Muskie's proposed water pollution control law is one of "the most important environmental conservation measures likely to be introduced in the 91st. Congress."

There is also proposed legislation called the Environmental Quality Improvement Act, to provide in the Executive Office of the President an Office of Environmental Quality. We quote: "the Congress recognizes that each person has a fundamental and inalienable right to a healthful environment and that each person has a responsibility to contribute to the preservation and enhancement of the environment."

There is a new and timely brochure, *What You Can Do About Water Pollution*, available from the Supt. of Documents, Govt. Printing Office Washington, D.C. 20402, for 15 cents. There is also a revised reprint of *Our Plundered Planet* by the late Fairfield Osborn, available in a \$1.95 paperback edition.

Every thinking citizen in the midwest is becoming concerned about the proposed development of a Nuclear Power Plant, commonly called a "nuke" in that area. Here in

the Carolinas such a plant is becoming a reality with hardly more than token resistance. The *Atlanta Journal* of Sunday, 12 October, has a page and a half in section C on the development of this plant and the possible effect of thermal pollution, if any, on South Carolina, and discusses precautions taken to prevent such pollution. Everyone concerned seems to be taking a "wait and see" attitude.

At the National level, Congress passed a bill authorized by Senator Muskie, calling for a one year moratorium on the licensing of nuke plants while the government takes a look at the problems of thermal pollution. The House has a somewhat similar bill, and a committee is working on a compromise.

The Raven Rock, N.C., scenic area has been cleaned up by local citizens, and a sign erected that will, hopefully, deter further desecration. This is the responsibility of each person who visits any natural beauty spot.

In continuing cooperation between CBC and GOS, President Robert P. Teulings has appointed Tom Rial of Aiken, S.C., liaison officer to deal with conservation matters pertinent to both clubs. This appointment is especially appropriate as Tom is a vice-president of CBC and newly elected first VP and Program Chairman for GOS.

December isn't too soon to think of 1970, and if this column is to function adequately under its present title, we need to be informed of Carolina conservation projects and problems. Do let's hear from all of you!

Wassaw Island Refuge

The Department of the Interior announced in October that a national wildlife refuge has been established on Wassaw Island in Georgia. The 12,000-acre island located 15 miles SE of Savannah was donated to the Federal Government by the Nature Conservancy.

Interior's Bureau of Sport Fisheries and Wildlife will administer the refuge, accessible only by boat, primarily to benefit waterfowl; but compatible recreation such as picnicking, fishing and swimming will be permitted.

The Nature Conservancy, a non-profit organization which seeks to preserve natural areas by acquiring them and then donating them to public agencies, purchased Wassaw from trustees of the George Parsons Trust. The trustees had stipulated that the area remain in its natural state and closed to industrial and commercial purposes.

In a letter to Nature Conservancy President Thomas W. Richards, Under Secretary of the Interior Russell E. Train said: "The preservation of the marshes on Wassaw Island will be of a real benefit to the waterfowl resource of the Atlantic Flyway. We also believe that the preservation of the wooded upland and the beach in its natural condition will be for the long-term benefit of the residents of Georgia and the Nation. As the development of the Atlantic coast continues, this property will remain as one of the few remnants of the natural ecology of the Atlantic coast."

Bald Head Island: More Rumors

The *Raleigh News and Observer* (11 November 1969) states in its column of political comment, "Under the Dome," that Gov. Bob Scott has "relayed the word to key members of the State Department of Conservation and Development that no permits authorizing dredging at Bald Head Island will be issued." Apparently Charles E. Fraser, developer of Hilton Head Island, S.C., will not exercise his option to buy the property from Frank O. Sherrill of Charlotte; but rumors persist that other developers are interested in the island. At the fall meeting CBC members went on record as favoring the preservation of Bald Head in its natural state and opposing encroachment upon the lands presently included in Umstead State Park.

SPRING COUNT — 1969

[illegible]

Turkey Vulture	113	5	14	11	2	—	1	1	—	—	10	11	7	13	4	29	2	*	2	1	—
Black Vulture	52	4	4	5	—	*	*	—	—	3	—	3	*	15	—	8	8	1	—	1	—
Swallow-tailed Kite	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sharp-shinned Hawk	7	—	1	—	—	—	*	—	—	—	—	1	2	1	2	2	—	—	1	—	—
Cooper's Hawk	5	—	—	—	—	—	*	—	—	—	—	1	—	—	2	2	—	—	—	—	—
Red-tailed Hawk	49	1	4	4	—	2	1	—	—	—	1	16	5	5	3	3	3	*	1	1	1
Red-shouldered Hawk	26	—	—	—	—	—	—	—	—	—	—	5	1	1	2	2	—	—	1	1	1
Broad-winged Hawk	17	—	—	—	—	*	1	1	1	—	1	4	—	1	6	1	2	*	—	—	—
Bald Eagle	1	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—
Marsh Hawk	7	2	3	—	—	*	*	—	—	—	—	5	*	—	1	1	1	*	—	—	—
Osprey	82	9	42	6	—	7	—	—	—	—	—	—	—	4	1	8	—	—	—	—	—
Pigeon Hawk	*	—	—	—	—	—	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sparrow Hawk	15	2	2	—	—	1	—	—	—	—	1	5	—	—	2	2	—	—	—	—	—
Bobwhite	1009	52	109	38	111	24	40	8	8	7	27	112	74	105	87	99	51	6	20	10	21
Turkey	1	—	—	—	—	—	—	—	—	—	1	—	—	1	—	*	—	—	—	—	—
King Rail	3	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Clapper Rail	113	55	51	6	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Virginia Rail	3	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sora	6	—	5	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—
Black Rail	2	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Purple Gallinule	1	—	1	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Common Gallinule	25	2	10	12	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
American Coot	400	68	536	30	1	—	—	—	—	—	25	1	—	—	2	9	—	—	—	—	—
American Oystercatcher	85	19	63	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Semipalmated Plover	89	24	62	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Piping Plover	4	1	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Wilson's Plover	109	61	48	—	—	—	*	2	—	1	19	3	—	8	3	33	8	6	1	—	—
Killdeer	84	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Black-bellied Plover	527	365	161	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ruddy Turnstone	12	6	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
American Woodcock	24	—	1	1	—	—	—	—	—	—	2	4	4	1	4	3	7	—	—	1	—
Common Snipe	40	5	1	—	—	—	1	—	—	—	15	—	—	3	—	12	1	—	—	1	—
Whimbrel	77	36	34	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Upland Plover	*	—	—	—	—	—	—	*	—	—	—	—	—	—	—	—	—	—	—	—	—
Spotted Sandpiper	85	5	3	2	7	—	2	3	—	1	1	20	2	12	6	4	6	3	4	2	2
Solitary Sandpiper	62	2	—	—	—	—	2	2	—	4	—	11	6	8	5	2	15	—	3	2	—
Willet	431	178	244	9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Greater Yellowlegs	167	81	64	7	—	—	*	1	—	1	5	—	—	2	1	1	1	—	—	—	—
Lesser Yellowlegs	70	33	23	—	—	—	—	—	—	—	7	—	—	4	—	—	—	—	—	—	—
Purple Sandpiper	1	1	—	—	—	—	—	—	—	—	1	—	—	2	—	—	—	—	—	—	—
Pectoral Sandpiper	9	3	1	1	—	—	—	—	—	—	1	—	—	2	—	—	—	—	—	—	—
White-rumped Sandpiper	23	4	19	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Least Sandpiper	36	10	1	—	10	—	10	—	2	2	1	—	—	—	—	8	4	—	—	—	—
Dunlin	1277	635	618	24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Short-billed Dowitcher	140	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Long-billed Dowitcher	4	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dowitcher (sp.?)	300	—	298	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Semipalmated Sandpiper	43	5	30	6	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—
Western Sandpiper	112	78	34	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

SPRING
COUNT - 1969

SPRING COUNT — 1969		COAST		COASTAL PLAIN					PIEDMONT												
Individual Totals	Morehead City, N.C. 20 April	Wilmington, N.C. 19 April	Charleston, S.C. 26 April	Beaufort Co., N.C.	Pamlico Co., N.C.	Fayetteville, N.C.	Southern Pines, N.C.	Dillon, S.C.	Eastover, S.C.	Henderson, N.C.	Raleigh, N.C.	Chapel Hill, N.C.	Greensboro, N.C.	Winston-Salem, N.C.	Stanly Co., N.C.	Charlotte, N.C.	Greenville, S.C.	Piedmont, S.C.	Anderson, S.C.	Caldwell Co., N.C.	
				11 May	4 May	5 May	27 April	24 May	2 May	3 May	4 May	3 May	3 May	26 April	4 May	3 May	3 May	26 April	3 May	3 May	3 May
Sanderling	95	104	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Great Black-backed Gull	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Herring Gull	182	798	15	—	—	—	—	—	—	—	—	—	—	—	—	10	—	—	—	—	—
King-billed Gull	264	330	37	10	—	—	1	—	—	—	12	—	—	—	75	—	—	—	—	—	—
Laughing Gull	1027	65	35	52	27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Bonaparte's Gull	62	51	3	—	9	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—
Gull-billed Tern	77	35	42	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Forster's Tern	59	3	56	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Common Tern	158	129	26	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Least Tern	453	128	289	27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Royal Tern	361	53	296	5	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sandwich Tern	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Caspian Tern	13	1	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Black Skimmer	784	628	156	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Rock Dove	863	82	41	83	2	20	41	7	—	49	233	15	98	100	27	9	3	3	3	50	—
Mourning Dove	1976	112	306	43	6	66	29	24	28	23	399	144	178	214	119	148	8	47	25	18	—
Ground Dove	4	—	4	—	—	—	—	—	—	—	3	1	4	1	1	—	—	1	1	1	—
Yellow-billed Cuckoo	31	—	—	9	2	*	4	2	—	—	—	—	—	—	—	—	—	—	—	—	—
Black-billed Cuckoo	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Barn Owl	6	—	1	—	—	—	—	—	—	—	2	*	1	—	1	1	—	1	1	—	—
Screech Owl	9	—	1	—	—	—	—	—	—	—	—	—	1	3	1	1	—	2	2	—	—
Great Horned Owl	10	—	1	—	—	—	3	—	—	—	3	7	1	3	1	1	—	—	—	—	—
Barred Owl	18	—	—	—	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Chuck-will's-widow	34	4	1	1	—	2	5	—	—	—	3	29	3	11	1	2	1	15	1	—	—
Whip-poor-will	113	1	—	—	—	—	2	—	—	—	26	—	12	4	1	3	*	5	2	3	—
Common Nighthawk	41	4	4	1	—	2	3	*	—	1	4	2	2	3	29	1	—	—	—	—	—
Chimney Swift	893	5	25	65	33	10	51	19	2	11	95	47	169	98	56	3	12	26	75	5	—
Ruby-th. Hummingbird	101	2	7	11	1	*	4	*	1	2	15	18	9	4	19	2	—	1	2	2	—
Belted Kingfisher	84	5	13	1	6	—	*	*	1	1	19	2	15	6	5	2	—	1	2	1	—
Yellow-shafted Flicker	530	36	85	15	30	7	4	6	3	16	68	23	105	27	50	16	3	8	7	11	—
Pileated Woodpecker	58	4	12	14	7	5	*	1	—	14	64	91	106	89	44	37	3	6	1	2	—
Red-bellied Woodpecker	586	8	50	23	13	8	13	5	—	8	17	6	14	5	6	3	1	1	1	1	—
Red-headed Woodpecker	159	9	40	12	21	7	2	—	1	8	34	41	38	18	21	11	1	1	1	—	—
Yellow-bellied Sapsucker	13	1	1	—	—	—	*	—	—	—	6	16	4	7	6	3	1	—	—	—	—
Harry Woodpecker	51	2	1	1	2	—	—	—	—	—	3	—	1	1	7	—	—	—	—	—	—
Downy Woodpecker	5	14	4	5	7	4	7	2	3	3	34	41	38	18	21	11	1	1	1	2	—
Red-cockaded Woodpecker	230	5	4	3	3	1	1	—	—	—	6	—	4	7	6	3	1	—	—	—	—
Eastern Kingbird	13	7	9	7	22	10	6	10	15	2	23	31	24	12	21	20	6	9	6	4	—

Great Crested Flycatcher	281	2	28	56	18	21	12	3	3	8	2	12	14	36	14	12	21	4	8	3	4
Eastern Phoebe	148	4	---	1	---	1	1	---	---	---	8	18	12	26	28	6	21	3	8	9	2
Acadian Flycatcher	84	---	3	7	3	2	1	*	---	---	10	2	14	8	11	3	20	---	---	3	---
Least Flycatcher	4	---	---	---	---	---	---	---	---	---	6	9	3	---	---	1	---	---	---	---	---
Eastern Wood Pewee	202	---	---	39	11	5	7	1	---	---	---	3	33	26	32	3	15	1	7	5	2
Horned Lark	30	---	---	---	---	---	2	---	---	---	---	---	---	5	5	---	5	2	5	3	---
Tree Swallow	1048	5	800	53	3	96	8	7	---	5	---	41	8	4	11	---	3	---	2	2	---
Bank Swallow	47	---	---	---	---	---	---	---	---	---	---	18	1	5	7	---	---	2	---	---	---
Rough-winged Swallow	251	27	18	---	8	---	14	2	*	5	9	61	7	44	11	8	3	2	6	23	3
Barn Swallow	1186	203	174	35	30	32	*	23	---	3	---	162	15	135	41	259	5	14	23	27	5
Cliff Swallow	28	47	152	29	142	53	*	---	---	---	---	56	10	59	62	300	35	2	41	4	30
Purple Martin	1022	30	450	230	129	19	97	41	16	37	54	319	283	423	88	313	129	12	73	27	27
Blue Jay	2797	41	52	54	2	2	34	10	7	13	2	126	83	142	101	115	51	6	63	6	8
Common Crow	918	90	180	8	33	3	---	---	---	---	---	5	---	---	---	---	---	---	---	---	---
Fish Crow	319	24	38	34	16	6	11	6	8	1	8	53	76	74	87	74	29	6	25	5	6
Carolina Chickadee	587	30	29	23	3	9	13	7	3	5	4	96	84	104	63	78	31	3	11	2	6
Tufted Titmouse	663	---	---	---	---	---	*	2	3	---	---	16	19	16	21	18	2	---	1	---	2
White-breasted Nuthatch	103	---	2	---	3	---	1	2	---	2	1	18	17	29	5	26	19	---	4	6	---
Red-breasted Nuthatch	13	---	20	14	8	---	2	4	1	2	---	2	8	17	2	15	3	---	---	---	6
Brown-headed Nuthatch	178	2	---	---	---	---	---	---	---	---	6	12	8	17	15	---	---	---	---	---	---
Brown Creeper	4	---	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
House Wren	85	1	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Winter Wren	5	---	---	---	---	---	*	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Carolina Wren	570	14	100	54	19	3	28	6	3	8	7	55	64	82	22	53	22	6	13	4	7
Long-billed Marsh Wren	21	3	15	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Short-billed Marsh Wren	7	1	4	---	---	---	---	---	---	---	---	2	---	---	---	---	---	---	---	---	---
Mockingbird	1993	53	212	43	52	25	100	31	39	18	98	207	84	369	161	223	138	8	85	25	22
Catbird	396	12	24	---	8	1	55	10	2	---	10	49	36	84	42	24	13	3	11	6	6
Brown Thrasher	816	19	89	10	38	9	50	9	17	6	31	72	49	180	61	100	28	9	20	12	12
Robin	1719	15	15	---	28	---	134	42	8	---	103	404	93	213	289	168	105	18	25	15	44
Wood Thrush	976	1	12	6	14	9	27	7	1	4	39	103	145	282	97	96	76	8	29	13	7
Hermit Thrush	10	1	2	---	---	---	---	*	---	---	---	---	3	---	3	2	---	---	1	---	---
Swainson's Thrush	32	---	1	---	---	---	---	*	---	---	---	---	---	16	6	---	5	1	---	---	---
Gray-cheeked Thrush	5	---	---	---	---	---	---	---	---	---	---	2	1	1	1	---	---	---	---	---	---
Veery	27	---	---	---	---	---	1	*	---	---	---	6	*	3	15	---	2	---	---	---	---
Eastern Bluebird	336	6	2	6	9	---	11	8	2	2	15	30	48	26	15	94	23	6	18	9	6
Blue-gray Gnatcatcher	322	6	25	12	4	3	6	10	1	3	3	60	50	24	36	27	32	---	5	14	1
Golden-crowned Kinglet	1	---	---	---	---	---	---	---	---	---	---	---	---	---	1	---	*	---	---	---	---
Ruby-crowned Kinglet	38	6	8	---	---	---	---	*	---	---	---	10	---	1	2	10	---	---	1	---	---
Water Pipit	10	---	---	---	---	7	---	---	---	---	---	---	*	1	---	---	---	---	---	---	---
Cedar Waxwing	1822	1	1	1	*	---	6	25	---	7	5	156	43	34	65	80	35	25	2	30	---
Loggerhead Shrike	151	2	8	7	1	2	8	2	4	3	12	23	10	16	4	30	15	2	6	1	---
Starling	5588	338	526	24	101	68	111	50	75	100	131	755	113	878	415	356	303	35	479	700	30
White-eyed Vireo	266	13	62	52	4	10	8	5	2	5	5	36	20	4	15	10	9	---	4	2	---
Yellow-throated Vireo	108	2	18	2	4	1	5	3	1	---	4	12	21	17	5	10	2	1	---	---	---
Solitary Vireo	21	---	---	---	---	---	1	---	---	---	---	3	4	2	10	---	---	---	---	---	---
Red-eyed Vireo	916	9	52	62	13	6	39	12	9	9	19	94	138	148	67	130	84	1	16	6	2
Warbling Vireo	2	---	2	---	---	---	5	*	---	1	---	30	---	6	2	---	---	---	---	---	---
Black-and-white Warbler	78	1	---	---	2	---	---	---	*	---	---	---	13	---	2	1	3	1	7	1	---

Orchard Oriole	10	22	20	17	11	16	4	1	15	—	21	5	16	4	4	9	1	4	2
Baltimore Oriole	8	2	—	—	—	*	—	—	—	—	7	2	4	1	6	1	—	—	—
Rusty Blackbird	30	—	—	—	—	15	*	—	—	—	—	4	—	25	6	10	—	—	—
Boat-tailed Grackle	200	215	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Common Grackle	436	126	33	173	60	64	37	83	123	110	535	68	1147	412	277	201	30	667	1000
Brown-headed Cowbird	78	58	—	3	21	6	1	3	6	2	28	36	96	38	203	21	4	23	2
Scarlet Tanager	—	—	—	—	—	2	*	—	—	11	11	10	33	7	12	1	1	1	2
Summer Tanager	309	—	—	—	—	18	5	6	3	14	35	51	41	6	45	13	2	4	1
Cardinal	83	327	60	74	18	97	48	34	30	69	273	267	317	281	485	164	12	55	30
Rose-breasted Grosbeak	—	—	—	—	—	—	2	—	—	—	3	1	9	—	—	—	2	1	—
Black-headed Grosbeak	—	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Blue Grosbeak	8	2	2	9	2	35	—	5	3	—	14	20	23	3	25	2	2	17	4
Indigo Bunting	7	5	21	31	14	36	*	6	5	1	8	61	36	18	26	31	4	22	16
Painted Bunting	—	—	21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dickcissel	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Evening Grosbeak	39	44	—	*	17	1	42	—	1	39	174	25	4	34	187	7	—	—	1
Purple Finch	5	1	—	—	—	*	—	—	—	—	11	2	—	—	*	3	—	—	—
Pine Siskin	—	—	—	—	—	50	13	—	—	—	33	4	1	69	4	6	—	—	—
American Goldfinch	1999	89	—	—	9	60	6	—	50	63	361	195	365	113	300	340	5	3	6
Rufous-sided Towhee	—	—	—	—	—	18	—	—	—	37	244	94	186	93	124	93	8	25	24
Savannah Sparrow	542	221	4	—	7	2	21	—	—	—	71	17	1	4	25	*	—	1	—
Grasshopper Sparrow	81	—	—	—	—	2	—	—	—	—	5	—	4	—	—	59	—	10	1
Sharp-tailed Sparrow	13	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Seaside Sparrow	88	31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vesper Sparrow	10	1	—	—	—	3	—	—	—	—	—	—	—	—	4	—	1	—	—
Bachman's Sparrow	—	—	—	—	—	—	—	—	—	*	7	—	—	—	—	—	—	—	—
Slate-colored Junco	—	—	—	—	—	*	—	—	—	—	3	—	—	—	—	—	—	—	—
Chipping Sparrow	735	20	—	5	2	4	9	3	11	17	120	69	108	63	145	43	4	31	30
Field Sparrow	550	40	20	2	5	1	6	4	2	7	66	16	68	46	65	30	12	67	75
White-crowned Sparrow	—	—	—	—	—	—	—	—	—	—	—	—	1	—	4	3	—	—	—
White-throated Sparrow	—	8	—	—	—	—	—	—	13	25	345	79	97	157	176	41	1	13	—
Lincoln's Sparrow	2	—	—	—	—	—	—	—	—	—	—	—	1	—	1	—	—	—	—
Swamp Sparrow	—	—	—	—	—	—	3	—	—	—	53	6	1	5	4	*	1	1	—
Song Sparrow	—	7	—	—	—	6	—	—	—	—	14	—	34	44	11	1	1	1	3
Total Number Species	163	170	112	87	74	91	96	55	63	74	151	111	132	129	126	116	70	93	94
Total Number Individuals	15518	13671	2240	1995	1310	1888	943	628	1083	1380	8945	3915	8734	4997	6864	3383	398	3318	3591
Field Observers	—	29	12	3	2	8	3	2	2	15	41	23	36	31	24	18	5	6	3
Yard Observers	—	5	—	12	1	6	4	—	—	—	—	10	3	—	25	2	—	—	5
Field Parties	—	8	—	1	1	2	3	1	1	—	11	10	9	12	11	8	2	4	2
Party-hours	—	11	—	4	—	—	—	—	—	95.5	82	87	97	117	118	64.5	22	18	14
Party-miles	—	126	33	13	12	—	20	13.5	12	45	266	180	355	353	206	267	40	239	178
	393	661.5	141	90	82	115	125	43	25	—	—	—	—	—	—	—	—	—	60

*Seen in count area during count period but not on count day.

SPRING BIRD COUNT—1969

ELOISE F. POTTER

With 242 species found on the count day, 1969 Spring Count participants nearly reached the record-breaking total of 246 listed in 1965. Wilmington led with 170 species, followed by Morehead City (163), Raleigh (151), and Greensboro (132). Of the 85,411 individual birds tallied, 15,518 were at Morehead City, 13,684 at Wilmington, and nearly 9,000 at Raleigh and Greensboro.

The Wilmington count was the earliest (19 April) and Dillon the latest (24 May), but 10 of the 20 counts took place from 2 through 5 May. Weather conditions were generally clear and calm with rain recorded only at Morehead City.

In an attempt to keep printing costs to a minimum without omitting the count table, much information formerly in the summary paragraphs now appears in the table heading (date of count) or at the end of the table (number of observers, party-hours, party-miles). Compilers' comments and the names of observers are given below in the order that counts appear in the table.

COMPILERS' COMMENTS

MOREHEAD CITY, N.C.: Black Rails were on a freshwater impoundment near North River (EP, WH). Long-billed Dowitchers were on a dairy near Harlowe (FLC, JTB). White-rumped Sandpipers were on Bird Shoal near Beaufort (JTB).—Frank L. Chapman

WILMINGTON, N.C.: Fulvous Tree Ducks (GM) were at Orton. White-rumped Sandpipers (FN, LO) were on Masonboro Island. Barn Owl (GM) was at Orton. Swainson's Warblers (MB, JC, MT) were at Wrightsville Sound, and Blackburnian Warbler (GM) at Orton. Dickcissel (KK) was in Wilmington. See General Field Notes for details on Black-headed Grosbeak seen during count period.—Dot Earle

SOUTHERN PINES, N.C.: Mallard and Ring-necked Duck were probably cripples. Swainson's Warbler (JHC III) was seen and heard in same part of Little River where species nested last year.—J.H. Carter III

DILLON, S.C.: Bald Eagle was flying N at about 900 feet. Broad-winged Hawk was clutching a small snake as it spiraled up from the forest.—John H. Wilson

EASTOVER, S.C.: Total absence of any species of hawk—puzzling!—Annie R. Faver

RALEIGH, N.C.: One Blue Jay was albino (CM, BV).—D.L. Wray

GREENSBORO, N.C.: Lincoln's Sparrow (JM).—Charlotte Dawley

WINSTON-SALEM, N.C.: Swainson's Warblers (RS, RH) were watched from 15 feet in good light. Nashville Warbler (CRH) was singing. It appears that weather conditions delayed some migrants, and high water in our few lakes reduced shorebird count.

STANLY COUNTY, N.C.: Connecticut Warbler (RB) is new species for area. Blue-winged Warbler was at same locality. White-crowned Sparrows were on Valley Drive and on Ray Hatley farm. Cliff Swallows returned to High Rock Bridge where they were first found nesting in 1967 (*Chat*, 31:72).—Mrs. Barrett Crook

CHARLOTTE, N.C.: Unusual sightings were as follows: American Woodcock (unusually numerous, DP), Pileated Woodpecker (DP), Red-breasted Nuthatch (Mrs. AAK), and White-crowned Sparrow (DP).—Doug Pratt

PIEDMONT, S.C.: The Greater Yellowlegs are new for area.—Carl R. Garrison

OBSERVERS

MOREHEAD CITY, N.C.: J.T. Best, F.L. Chapman, J.O. Fussell Jr., Mary Fussell, J.O. Fussell III, Will Hon, Dave Jennings, Charles Lincoln, Eugene Pond, Bob Simpson, Mary Simpson, Tommy Wade, R.B. Williams, Doris C. Williams, Rita J. Williams, Doug Wolfe.--Frank L. Chapman, Box 71, Smyrna, N.C., and John O. Fussell III, Box 520, Morehead City, N.C.

WILMINGTON, N.C.: Katharine Alexander, Edna Appleberry, Mike Browne, Jay Carter, Frank Chapman, Jenny Dyches, Dot Earle, Bill Greene, Gilbert Grant, James Hunt, Frank Kosh Jr., Kitty Kosh, Edmund LeGrand, Harry LeGrand, Dale Lewis, Greg Massey, Billy McEachern, Polly Mebane, Darryl Moffett, Frances Needham, Lou Overman, James Parnell, Will Post, Alice Roe, Bill Roe, Bob Teulings, Elizabeth Teulings, Mark Thompson, Mary Urich.--Dot Earle, 428 Causeway Drive, Wilmington, N.C. 28401

CHARLESTON, S.C.: T.A. Beckett III, E.L. Blitch, Miss Frances Brewster, Mrs. Jack Button, E.B. Chamberlain, Mrs. R.H. Coleman, Teague Coleman, Edmund Cuthbert Jr., William McIntosh Jr., Albert Sanders, Mr. and Mrs. L.S. Smith Jr.--E.B. Chamberlain, P.O. Box 3039, Charleston, S.C.

BEAUFORT COUNTY, N.C.: Ethel Barkley, Mary E. Brown, Phyllis Carver, Geraldine Cox, Sybil Dogget, A.O. Edington, Rhoda Koshack, Mary McLaurin, James McLaurin, Louise Satterthwaite, Mary L. Smith, Elizabeth Sterling, Hugh Sterling, Ellis Turnage, Marvin Turnage.--Geraldine Cox, Route 1, Box 115, Merritt, N.C. 28556

PAMLICO COUNTY, N.C.: Geraldine Cox, Marvin Turnage.--Geraldine Cox, Route 1, Box 115, Merritt, N.C. 28556

FAYETTEVILLE, N.C.: Mrs. L.E. Whitfield, Mrs. Mosley Chesnutt Jr., Mrs. R.E. Rhodes, Miss Catsie Huske, Mrs. Neill Currie Jr., Mrs. S.C. Rankin, Mrs. J.A. Shaw, Mrs. Jonathan Courtney, Mrs. C.T. Haigh Jr., Mrs. Roscoe Hauser Jr., John Butler, Byron Williams, Henry Rankin, Charles T. Haigh III.--Mrs. Whitfield and Mrs. Hauser

SOUTHERN PINES, N.C.: Eleanor Carter, J.H. Carter Jr., J.H. Carter III, Lura Williams, Mary K. Wintyen, Ethel Wotton, Leslie Wotton.--J.H. Carter III, P.O. Box 891, Southern Pines, N.C. 28387

DILLON, S.C.: J.H. Wilson, Johnny Wilson.--J.H. Wilson, Box 535, Dillon, S.C. 29536

EASTOVER, S.C.: Annie R. Faver, Kay C. Sisson.--Annie R. Faver, Eastover, S.C.

HENDERSON, N.C.: Neita Allen, Mr. and Mrs. A.W. Bachman Sr., Annie G. Burroughs, Ruth Carter, Mary Francis Chavasse, James Connell, Eric Flannogan, Mrs. E.W. Gierisch, Mrs. S.R. Harris, Mr. and Mrs. Herbert Huggins, May Hunter, Mrs. Russell Parham, Mrs. Robert Weathersbee.--A.W. Bachman Sr., 111 Jennette Avenue, Henderson, N.C. 27536

RALEIGH, N.C.: Mr. and Mrs. Don Bates, Mr. and Mrs. Charles Bryan, J.W. Chalfant, Mr. and Mrs. J.N. Coffey, Danny Coffey, Mr. and Mrs. James Cox, Mrs. Lloyd Davis, Gilbert Grant, J.F. Greene, Dorothy Grigg, R.J. Hader, Bill Hamnett, Mrs. William Hatheway, Mrs. J. Heater, Esther Ivey, Mr. and Mrs. John Lamson, Dr. and Mrs. Joshua Lee, Charles Leibbrandt, Carl Leibrandt, Edmund LeGrand, Harry LeGrand, Chris Marsh, Marilyn Middleton, Edna Miller, Jim Pullman, Suzanna Schuhmann, Mrs. Ben Smith, Tim Shriver, Gwenn Turbiville, Burt van der Vaart, Joyce Ward, Mrs. Carl Whitehurst, Dr. and Mrs. D.L. Wray, Pauline Yarborough.--David L. Wray, 510 Dixie Trail, Raleigh, N.C., and Mrs. William Hatheway

CHAPEL HILL, N.C.: Dale and Alma Beers, George Bissinger, Sandy Buntin, Bill Dye, Jules Favre, Oliver Ferguson, Ashby, Leigh and Susan Fristoe, Robert Geist, Claude George, Ruth Groud, Elinor and Logan Irvin, Edmund and Harry LeGrand, Stella Lyons, Gerald McCarthy, Arch McCallum, Mary Nash, Johnnie Payne, James Pullman, Mark Simpson, Wilma Stuart, Elizabeth and Robert Teulings, Elinor Wagstaff, Adelaide Walters, Pauline and James Wearn, Josephine and Fred Weedon.--R.P. Teulings, Route 2, Chapel Hill, N.C. 27514

GREENSBORO, N.C.: Mr. and Mrs. D.F. Allen, Rose K. Avery, Fred Barry, Mrs. J.F. Benson, Ellene Y. Cobb, Inez Coldwell, Larry Crawford, Mrs. G.W. Daniels, Charlotte Dawley, Mr. and Mrs. F.L. Fish, Jean Gertz, H.H. Groover, Herbert Hendrickson, Sidney Holmes, Mrs. Clarence Knight, Mrs. B.S. Lambeth Jr., R.L. Lasley, Harold LeDuc, James Mattocks, Mrs. Robert McCoy, Ethel McNairy, Ida Mitchell, Mrs. G.F. Norcross, Elizabeth Ogburn, Mrs. David Parsons, Annie Laurie Perdue, Etta Schiffman, Mrs. W.D. Seawell, Mrs. A.D. Shaftesbury, George Smith, Mrs. W.F. Smyre, T.E. Street, Mrs. Ralph Weisner, Helen Zuk.—Charlotte Dawley, 114 S. Mendenhall, Greensboro, N.C. 27403

WINSTON-SALEM, N.C.: Robert Baldwin, Grace Cole, Carolyn Cowherd, Yel Cowherd, Jess Craven, John Davis, Velma Davis, Charles Frost, Gardner Gidley, Gary Gidley, Margaret Gidley, Fred Hill, Patti Hill, Ruth Hill, C.R. Hough III, Wayne Irvin, Dwight Lee, Polyana Lee, Ann Listokin, Pat McGrane, Susan Moore, Ann Pollard, Jackie Shelton, Ramona Snively, Becky Spinks, Edie Spinks, Edward Thompson, Myron Vourax, Robert Witherington.—C. Royce Hough III, 532 Walter Court, Winston-Salem, N.C. 27103

STANLY COUNTY, N.C.: Roy and Erin Blalock, Louise Bizuk, Margaret Crawley, Barrett and Vera Crook, Pauline Culp, Myrtle Culp, Nina Eudy, Joe and Melba Ferrebee, Virginia Foglia, Mary Ellen Goforth, Naomi Goforth, Mattie Gereg, Mary Gullege, Bill and Ann Hatley, Louise Hammil, Edward Harris, Lecti Harwood, Nelle Hinson, Jean Honeycutt, Myrtle Isenhour, Mike and Maxine Isenhour, Margaret Johnston, Janie Kimrey, Vera Littleton, Fisher and Wilmetta Maner, Susan Manly, Doris and James Mauney, Paine Misenheimer, Annie Misenheimer, Harold and Grace Morris, Helen Mount, Boyd Newsom, Ann Olsen, Spencer Plyler, Tim Reeves, Addie Thompson, John and Vivian Whitlock, Vivian Winget.—Mrs. Barrett Crook, Route 2, New London, N.C. 28127

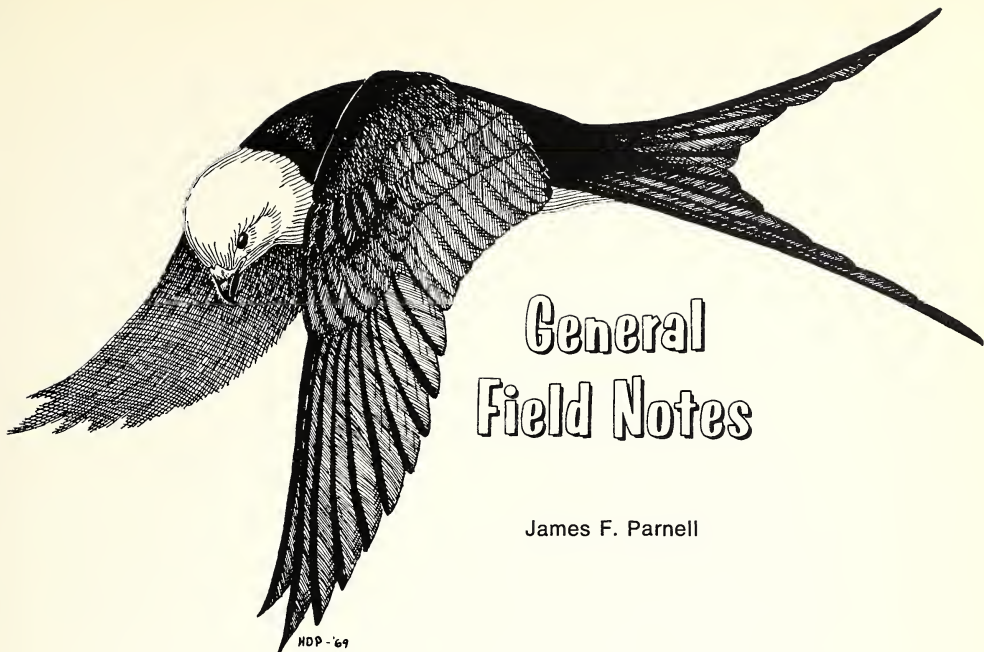
CHARLOTTE, N.C.: Mrs. M.J. Barber, Mrs. E.O. Clarkson, Mrs. W.G. Coby, Mr. and Mrs. A.H. Dykema, J.P. Hamilton, Mrs. Herbert Hampton, Mrs. A.A. Kittinger, H.B. Mayer, Mrs. T.L. Millwee, Mr. and Mrs. J.R. Norwood, Mrs. Preston Nowlin, J.M. Petty, Mrs. George Potter, Doug Pratt, Oren Rhyne, Tommy Rhyne, William Smith, Joan Templeton, Vaud Travis.—Doug Pratt, Route 3, Box 113L, Charlotte, N.C. 28210

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ANDERSON, S.C.: Carl R. Garrison, Adair M. Tedards, Reggie Titmas.—Carl R. Garrison, Route 4, Box 228, Easley, S.C. 29640

CALDWELL COUNTY, N.C.: Mrs. W.E. Alexander, Mrs. Murray Bruner, Mrs. R.T. Greer, Mrs. Bynum Laxton, Mr. and Mrs. E.M. Manchester, Helen Myers, Dr. and Mrs. James Segars, Mr. and Mrs. Robert Styres, Joyce Whitman, Miss George Wilcox.—Miss Helen Myers, 310 Beall Street, Lenoir, N.C. 28645



General Field Notes

James F. Parnell

Nesting Status of the Common Tern In Southeastern North Carolina

FRANCES NEEDHAM
Box 81, Wilmington, N.C.

30 July 1969

The nesting range of the Common Tern (*Sterna hirundo*) is given in *Birds of North Carolina* (Pearson, Brimley, and Brimley, 1942; revised by Wray and Davis, 1959) as "no further south than Morehead City and Shark Shoal in the Beaufort, N.C. harbor," with an additional record from Southport listed in 1943. Bent (*Life Histories of North American Gulls and Terns*, 1921) gives the breeding range as the Atlantic Coast south to North Carolina (Pamlico Sound).

Since 1965 I have searched the Wrightsville Beach area for nests of the Common Tern and have found evidence of nesting on several occasions.

On 2 July 1965 T.L. Quay and I located one nest on Masonboro Island just south of Wrightsville Beach. This nest was on high ground, in the open, but in the crook of a dead gull's wing. The nest was unlined and contained three eggs. This nest was observed on several occasions, and two of the eggs hatched successfully.

During 1966 no nests were located.

On 28 June 1967 one nest was located on high ground on Bird Island, in the sound just behind Wrightsville Beach. This nest was in low grass and was lined with bits of dried grass and shell. In 1968 a thorough search of this island provided no evidence of nesting.

On 4 May 1968 two adult Common Terns were seen over Masonboro Island. They were joined by at least two other Common Terns on 4 June. On this date one nest was found when an adult bird was flushed from it. This nest was lined with bits of shell and contained three eggs. A second nest lined with grasses also contained three eggs.

On 9 June three Common Tern chicks were found; two in the shell-lined nest and one in the grass-lined nest. By 27 June all six eggs had hatched and the nests appeared

abandoned. The four adults continued protective action indicating nesting success. Late in July these four adults were joined by about 35 to 40 other Common Terns.

On 16 June 1969 one Common Tern nest was found on the high ground of Masonboro Island, and the next day James Parnell and his ornithology class found a second Common Tern nest and two Gull-billed Tern nests nearby. On 25 June a third Common Tern nest was found in a sandy area near one of the 1968 sites. At this time one egg in the earliest nest found had hatched and a second was in the process of hatching.

On the basis of these records over the past 5 years it seems that although the Common Tern is not an abundant breeding bird in the Wrightsville Beach area, it is a regular nesting species. The nesting range should therefore be extended as far south as Wrightsville Beach.

Green Heron Nesting on the Ground

GILBERT S. GRANT

Route 1, Box 363, Sneads Ferry, N.C.

19 June 1969

The nest of a Green Heron (*Butorides virescens*) was found on the ground on 20 April 1969 in the Alligator Bay heron rookery near Sneads Ferry, Onslow County, N.C. The well-constructed nest contained two eggs on this date. I again visited the nest on 30 May and found it ripped apart. One egg had been bitten into and the other egg could not be found.

Hatch (in Bent, *US Natl. Mus., Bull.* 135:186, 1926) says of the Green Heron: "Instances have occurred under my observation, where in the entire absence of trees or bushes of any size, they have placed the nest, composed of coarse dry weeds and reeds and cat-tails, on a tussock in a reed-hidden quagmire." Palmer (*Handbook of North American Birds* Vol. 1, p.422, 1962) indicates that the Green Heron does nest on the ground upon occasion but does not comment upon the vegetation present under such circumstances. In this instance many bushes and small trees, mostly Wax Myrtle (*Myrica cerifera*), were near the nest. The trunk of one Wax Myrtle was less than a foot from the nest. Seventeen other Green Heron nests were studied in the rookery. The mean height of these nests was 3.8 feet and ranged from 0.9 to 7.3 feet.

Cattle Egret Off the North Carolina Coast

FRANK ENDERS

Division of Research, N.C. Department of Mental Health
Raleigh, N.C.

1 August 1969

On 27 April 1968 I saw single Cattle Egrets on two occasions from the R.V. *Eastward*, Duke University's research vessel, off Cape Lookout, N.C.

At the first sighting the ship was at 33° 51'N, 75° 46'W, 65 miles offshore and maintaining its heading southward but not moving at any appreciable speed. At 6:00 A M a small egret with flesh-colored bill and buff about the head and neck flew toward the ship from the north. This Cattle Egret approached the ship's stern, circled above the ship at a height of about 25 yards, and left flying south. The bird was seen through 8 X 40 binoculars and all field marks were observed.

At 8:30 AM a Cattle Egret circled the ship many times, remaining in the vicinity for about 15 minutes. Its directions of approach and departure were not observed. At this sighting the ship was at 33° 58'N, 75° 46'W or 71 miles offshore. This was about 7 miles SE of the earlier sighting. Whether this was the same or a second egret is not known.

There are numerous April and May records of Cattle Egrets in the Northeast (*Audubon Field Notes*, Spring Migration issues, 1962 to present and *Handbook of North American Birds*, Palmer, 1962). Such records would indicate that the bird or birds observed could have been migrants. Whether such offshore movements are regular or accidental is unknown.

Yellow Rails at Beaufort, N.C.

FRANK L. CHAPMAN

P.O. Box 71, Smyrna, N.C.

28 May 1969

Burning in early spring is a favorite method used to rid fields of dead grass and weeds. Although it does no permanent damage to the spring growth of plants, it does rather quickly remove the vegetative cover of any of the animals living there.

This method is practiced annually at the Beaufort-Morehead City airport in Carteret County, N.C. This year on 13 March I was present. Spot fires were started along one side of the field, allowing the fire to burn evenly across the entire field. After the fire had moved a short distance I noticed several small birds, which I could not immediately identify, fly up in front of the fire. Their flights were approximately 10 to 20 feet before landing. The most conspicuous markings were white patches on the back of the wings near the body. I was able to catch one of the birds as it alighted and identified it as a Yellow Rail.

By this time the fire was moving rapidly toward the center of the field, and I was able to see many more Yellow Rails, as well as other species, moving in front of the fire. Many of these birds landed on the paved runways at the edge of the field. Surprisingly, most of the Yellow Rails seemed dazed and would allow me to pick them up. Besides the Yellow Rails, one Black Rail, four Short-billed Marsh Wrens, and many Savannah Sparrows landed on the runway.

I had forgotten to count the Yellow Rails during the fire, but 28 remained on the runway after the fire had been extinguished. I am sure that the actual count of birds seen was more than 50. Several photographs were secured.

[While the few records of this species in North Carolina indicate that it is probably an uncommon transient and perhaps a rare winter resident, its status is very much in doubt. Most prior North Carolina records have been in the fall. Records such as this indicate that this elusive bird may be much more common than is apparent.--DEPT. ED.]

Nesting of the Brown-headed Nuthatch in the Southern Appalachians

MARCUS B. SIMPSON JR.

University of North Carolina, Chapel Hill, N.C.

16 February 1969

Pearson, Brimley, and Brimley (1942) state that in North Carolina the Brown-headed Nuthatch (*Sitta pusilla*) has never been sighted west of Burke County, with all records limited to the regions "east of the mountains." Furthermore, volumes 1-32 of *The Chat* reveal no subsequent observations of this species within the Appalachian region; and the bird has therefore been regarded as a resident only of the piedmont and coastal plain.

During the past year, my biographical studies of John S. Cairns have revealed a number of records, heretofore unpublished, concerning the Brown-headed Nuthatch in the French Broad River basin of Buncombe County. Although Cairns (1887, 1889, 1891) makes no mention of the species of his earlier lists, his unpublished manuscript on

the birds of western North Carolina, dated around 1894, lists the Brown-headed Nuthatch as species No. 203.

“(Sitta pusilla) Brown Headed Nuthatch. Not observed until the season of 1893 & 94 when I observed a few in Weaverville on October 5; a pair in November & December. Three specimens taken Jan. 3rd 1894 and others seen. So far this is the first occurrence of this bird west of the Blue Ridge.”

Cairns probably completed this manuscript during January 1894. Consequently his later observations are found only through examining his correspondence with the distinguished Harvard ornithologist, William Brewster. In a letter dated 22 April 1895, Cairns informed Brewster of his experiences with the bird, including a record of the first and apparently the only nest ever found west of the Blue Ridge Escarpment.

“By the way the Brown headed Nuthatch has become a common resident both in winter & summer or at least they were common the past summer. I first observed them in October 1893 but failed to secure any as had no gun with me. Observed them in November & took three specimens in Jan. — since then they have been common & last season I took a set of eggs.”

Brewster subsequently inquired about the origin of this influx, and Cairns replied in a letter dated 23 May 1895: “I don't think they came from the south, as they were in company with a flock of migrating birds when I first observed them.”

It would be most interesting to know additional details about the extent and eventual fate of this invasive population, but Cairns' tragic death on 10 June 1895 brought an end to systematic field work in western North Carolina for the following three decades. By 1930, when Thomas D. Burleigh began his extensive studies around Asheville, the Brown-headed Nuthatches had disappeared from the region; and no additional sightings have been recorded since Cairns' last letter to William Brewster.

ACKNOWLEDGMENTS

I am indebted to Perkins Library of Duke University for permission to quote from Cairns' 1894 manuscript and to the Museum of Comparative Zoology, Harvard University for the rights to Cairns' correspondence with William Brewster.

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American Redstart Nesting in Richland County, S.C.

BRUCE A. MACK
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15 February 1969

On 19 May 1968 I saw a female American Redstart (*Setophaga ruticilla*) carrying nesting material to a nearly completed nest located about 35 feet above ground in a red maple (*Acer rubrum*) near Cedar Creek, approximately 15 miles SE of Columbia, Richland County, S.C. In nearly 4 hours of observation on that date, no male was seen

and no song heard. On 21 May the bird spent more time in the nest. By 25 May, the bird appeared to be incubating; she remained on the nest except for brief foraging trips at intervals of 15 to 20 minutes. Mrs. Theo Hartin and son, James S. Hartin, saw the bird on 1 June and again on 9 June, but were unable to determine whether there were eggs or young in the nest.

The inaccessible nest was not examined. No male was ever seen or heard. On 3 July the nest was found to be almost completely destroyed, and no redstarts were located at that time. In view of these facts, it is impossible to state with certainty that this represented an actual breeding station. It is certain that as late as 9 June a female American Redstart was attempting to nest in Richland County.

The only previous indication of the breeding of the American Redstart in South Carolina is a record of an adult female feeding an immature bird out of the nest on 21 July 1956, 1 mile S of Jocassee, Pickens County (Shuler, *Audubon Field Notes*, 10:378).

Black-headed Grosbeak at Wilmington, N.C.

MRS. FRANK T. KOSH
188 Lake Forest Parkway, Wilmington, N.C.

1 June 1969

On 8 April 1969 I was at the home of my parents, Mr. and Mrs. P. M. Hunt, 2015 Barnett Avenue, Wilmington, N. C. At 1:30 PM my father asked me to identify a strange bird on his feeder. The bird was rusty on the breast and down the back, with a black head and black wings with large patches of white in them. It had a yellow area on the belly, yellow wing linings, the heavy grosbeak bill, and a rusty eye stripe. It was unmistakably a young male Black-headed Grosbeak (*Pheucticus melanocephalus*). Since there was no record for this bird in Wilmington, I called Mrs. Cecil Appleberry and Mrs. Lou Overman who verified my identification on 9 April. On 10 April the grosbeak was photographed at the feeder by James F. Parnell. The Black-headed Grosbeak was associated with a flock of Evening Grosbeaks (*Hesperiphona vespertina*) and came regularly to the feeder at intervals of about an hour and a half through 16 April 1969, thanks to an abundant supply of sunflower seeds and water provided by Mrs. Hunt. During this period the bird was observed by many members of the Wilmington Natural Science Club.

[This appears to be the second record of the Black-headed Grosbeak in North Carolina. The first record was from Greensboro in January of 1964.—DEPT. ED.]

NOTICE

We would once again like to remind contributors (old and new) to return their completed cards to the Laboratory of Ornithology, Cornell University, Ithaca, New York 14850, or to their nearest Regional Center (complete listing in *Audubon Field Notes*). We are also interested in records from previous years, and if anyone has extensive notes from earlier years, we are willing to undertake the task of transferring the data.

During the past few months considerable progress has been made in editing and punching data and writing computer programs for analysis of data. Any serious worker interested in using the material should contact the Director of the program, Dr. David B. Peakall at the Laboratory of Ornithology.

Briefs for the Files

Compiled by JAMES F. PARNELL

(all dates 1969 unless otherwise stated)

- RED - NECKED GREBE: Two were seen on 1 and 22 March at Topsail Island, N.C., by Gilbert Grant.
- ANHINGA: Much more common at Wilmington, N.C., this year than for the past several years, James Parnell.
- MAGNIFICENT FRIGATE-BIRD: A single bird was seen over Alligator Bay at Sneads Ferry, N.C., on 8 June by Gilbert Grant.
- DOUBLE-CRESTED CORMORANT: Three were found on 17 May at Winston-Salem, N.C., by C. Royce Hough.
- CATTLE EGRET: Inland 11 were found at Raleigh, N.C., on 19 April by Robert Hader.
- YELLOW-CROWNED NIGHT HERON: A single bird was found near Columbia, S.C., on 23 March by Bruce A. Mack.
- WHITE IBIS: Approximately 20,000 pairs nested in the Charleston-Georgetown region this year according to Ted Beckett.
- BLUE-WINGED TEAL: Inland an adult with two young was found at North Wilkesboro on 22 May by Wendell Smith. Seven adults and two young were found by Gilbert Grant on an impoundment at West Onslow Beach on 22 June indicating nesting south of the usually recognized southern limit of nesting at Cape Hatteras.
- HARLEQUIN DUCK: A male and female were seen near Beaufort, N.C., on 13 March by Eugene Pond.
- COMMON SCOTER: Four were seen on Thaggard's Lake near Southern Pines, N.C., on 24 March by Jay Carter.
- RED-BREASTED MERGANSER: On 30 March a flock of 63 was seen at Lake Benson near Raleigh by the North Carolina State University ornithology class and reported by Robert Hader, and 40 were seen on nearby Lake Wheeler by Edmund and Harry LeGrande.
- COMMON MERGANSER: Four were at Raleigh on 21 December 1968, Harry LeGrande.
- SWALLOW-TAILED KITE: A single bird was seen at Stonewall, N.C., on 15 July by Joel Clark.
- BALD EAGLE: Nine nests were found in the Charleston region by Ted Beckett, who reported that at least three young birds fledged.
- UPLAND PLOVER: Two were seen at Southern Pines on 27 April by Jay Carter while three were found at Raleigh on 7 April by Edmund and Harry LeGrande.
- SEMPALMATED SANDPIPER: Two were recorded at Raleigh on 13 May and 1 on 17 May by Robert Hader, while 2 were seen on 27 May by Harry LeGrande.
- WHITE-RUMPED SANDPIPER: One was seen near Raleigh on 13 May by Robert Hader.
- BLACK-NECKED STILT: Fourteen adults were found at West Onslow Beach, N.C., on 22 June by Gilbert Grant. Their behavior indicated the possibility of nests but none were found. The only known nesting locality for this species in North Carolina is in the Cape Hatteras National Seashore.
- POMERINE JAEGER: A single bird was found by Frank Chapman at Cape Lookout, N.C., on 18 May.
- PARASITIC JAEGER: Six were found at Cape Lookout on 17 May by Henry D. Haberyan.
- LAUGHING GULL: Ted Beckett reports that this species is increasing as summer residents in the Charleston vicinity to the detriment of the Least Terns.
- BONAPARTE'S GULL: Inland a single bird was seen at Raleigh on 3 April by Robert Hader, and two were there on 26 April, Harry LeGrande. One was also seen at North Wilkesboro on 2 April by Wendell Smith.

BLACK-LEGGED KITTIWAKE: One was found dead at Cape Lookout on 13 March by Eugene Pond.

BARN OWL: A single bird was found near Lake Wheeler at Raleigh on 15 March for the first local sighting in several years, Harry and Edmund LeGrande.

SHORT-EARED OWL: Two were seen about 11 miles SE of Columbia, S.C., on 23 March by Bruce A. Mack, and one was seen over the Beaufort, N.C., airport on 1 February by Frank Chapman.

RED-COCKADED WOODPECKER: An active nest with three adults in attendance was located by Jay Carter on 24 May near Southern Pines, N.C.

CLIFF SWALLOW: Four or five pairs were seen at a bridge near Lake Tillery on 29 June by Jay Carter. No active nests were located.

PURPLE MARTIN: This species was found to be much reduced in numbers at Charleston according to Ted Beckett. Martins were also very scarce during the breeding season at Timmonsville, S.C., Mrs. Halie Anderson.

WINTER WREN: One was heard singing in June at the rather low altitude of 3,600 feet in Jackson County, N.C., by Mark Simpson.

SWAINSON'S THRUSH: Single birds were heard in song at Raleigh on 12 and 16 May by Robert Hader.

SOLITARY VIREO: A nest was found at Southern Pines on 9 June by Jay Carter. This is along the eastern edge of the very poorly defined breeding range of this species.

WARBLING VIREO: A single bird was found at Hoffman, N.C., on 4 May by Jay Carter, and two were at Winston-Salem on 13 May, Charles Frost and Fred S. Hill.

PROTHONOTARY WARBLER: Three pairs at Salem Lake in Winston-Salem on 21 April were rather far inland for this species, C. Royce Hough.

GOLDEN-WINGED WARBLER: A single bird was seen at Raleigh on 26 April by Robert Hader. The bird is a rare migrant in the Raleigh region.

SWAINSON'S WARBLER: Four were seen and heard at the fish hatchery 15 miles north of Walhalla in Oconee County, S.C. by John E. Cely. At Southern Pines Jay Carter again found several birds on territory but no nests were located. Several were also found at Wilmington during the spring and summer.

ORANGE-CROWNED WARBLER: One was late at Winston-Salem on 21 April, C. Royce Hough. Individuals were also at Raleigh on 11 January, Robert Hader; and on 30 January, Harry LeGrande.

BLACKBURNIAN WARBLER: One was seen at Southern Pines on 23 April by Jay Carter.

YELLOW-HEADED BLACKBIRD: Two were found at Lake Mattamuskeet, N.C., by Ted Beckett during the winter Carolina Bird Club meeting on 19 January. A single bird seen at Hilton Head Island, S.C., between 7 and 12 March was the second record for that locality, Caroline Newhall.

PAINTED BUNTING: A female was regular at the feeder of Gerold Knight at North Augusta, S.C., between 27 December 1968 and 24 January 1969. The bird was studied carefully by many observers and photographs were secured. Reported by Tom Rial.

DICKCISSEL: A single bird remained at Wilmington until 20 May, Kitty Kosh.

HOUSE FINCH: At least 2 were present at Mrs. W.J. Underhill's feeder in Wendell, N.C., from 16 December 1968 through 16 January 1969, reported by Robert Teulings.

RED CROSSBILL: Five were seen on 12 February at Winston-Salem at the feeder of Ruth Hill and reported by C. Royce Hough.

IPSWICH SPARROW: One was seen feeding with a flock of Savannah Sparrows on 22 March just north of Surf City, N.C., by Gilbert Grant.

HENSLOW'S SPARROW: A small colony was discovered by Garvin Hughes at Lake Mattamuskeet during the Carolina Bird Club meeting on 19 January, reported by Robert Teulings.

MacGILLIVRAY'S SEASIDE SPARROW: Ted Beckett reported a new nesting site for this race of the Seaside Sparrow in Muddy Bay near Georgetown, S.C.

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OUR COVER—The Red-cockaded Woodpecker is shown in its Sandhills habitat in a drawing by Doug Pratt.

SOME OBSERVATIONS ON THE DISPERSAL OF FLEDGLING PURPLE MARTINS FROM THE NESTING SITE

JOSHUA A. LEE

Among birds, solitary nesters, or those that nest in cavities within colonies, need not be able to recognize their own young before they leave the nest providing that:

- (1) the parent birds have the capacity to learn to recognize the nesting site itself.
- (2) they learn to recognize their own young after they become mobile, that is to say, after they leave the nest.

There is evidence that individual pairs of Purple Martins (*Progne subis*) are virtually infallible in their ability to recognize their own nesting compartment but unable to recognize their own young in the nest.

Site recognition experiments were performed in the following manner: differences in breast color of females were noted and, based on this, nesting territories of several individual birds established. Such markers as missing tail and wing feathers were also useful in identification, and one male was identified by the fact that he was partially bald. The house (gourds suspended from crossbeams at the top of a metal pole) was rotated so that a given compartment faced in different directions at different times. These maneuvers created only temporary confusion; usually within an hour each pair reclaimed its own "property." The outcome was the same if the experiment was performed before eggs were deposited, during incubation, or while the young were in the nest. Clearly martins possess the ability to recognize, and develop a strong attachment to, a specific site within a colony, and this attachment seems to function as the "homing" device rather than any ability to recognize the offspring as individuals.

On several occasions I have interchanged young among nests without any evidence that regular patterns of parental care were disrupted. However, placing of young of disparate ages in the same nest frequently results in starvation of the less advanced individuals. If a young bird should die in the nest, it is usually removed by one of the parents. I once observed a female bird transport a dead 10-day old chick 125 feet from the nest before dropping it. If chicks placed with broods of more advanced age subsequently perish, they are routinely removed from the nest. The removal response seems to be elicited by the fact that the chick is dead and not because it is the offspring of another pair, since I have no record of live chicks being ejected from nests.

If the introduced fledgling is approximately the same age as its foster siblings, its chances of survival are about as good as any in the group. If a brood numbers no more than four, and one is replaced by an introduced chick of the proper age, its survival is assured.

Inability to recognize one's own young could pose hazards when the young are ready to leave the nest. The most obvious of these is loss of contact between parent and offspring before the period of paternal care should normally end. It thus seems reasonable to assume that martins learn to recognize their own young at some time during development, perhaps before they leave the nest. However, certain behavioral patterns of parents and other adult members of the colony toward young as they leave the nest suggests that recognition of young by parents at this time is not well developed.

The parents cease feeding the young in the nest when they are about 26 to 28 days of age. At least one of the parents, however, remains in the vicinity of the nest. Eventually one of the young birds ventures out of the nest and attempts to cling to the sides of the nesting chamber. It is immediately mobbed by adult members of the colony and flies away, apparently in attempts to avoid them. Harassment continues until the fledgling either perches on some object near (but not in) the colony, or flies approximately 200 yards from the colony. Among the entourage pursuing the young bird is one of the parents, usually the female. The parent does not appear to participate in the mobbing,

but stays close to the fledgling while it is flying and after it has perched. Eventually, after repeated short flights, during which it is mobbed by adults, the young bird finds its way to a treetop some distance from the colony. Here it remains unless escorted elsewhere by its parents. This procedure is repeated until all members of the brood are brought together in a group well isolated from the colony. The young then remain with the parents until they become independent, a period lasting about three more weeks.

Three significant facts emerge from the foregoing observations:

- (1) under natural conditions, the young emerge from the nest one at a time.
- (2) the parents attend the newly emerged young closely within the "mobbing range" of the colony.
- (3) after the young bird is beyond the "mobbing range" of the colony, it is left in a treetop, or some similar open site, while the parents attend to the emergence of the remaining young. The young bird remains stationary until encouraged to move by the presence of its parents.

Such behavior suggests that the parents key on an emergent young bird and never lose sight of it until it is established in an isolated site where it is not likely to be disturbed. Thus there is a transition from a fixed site within the colony to "mobile" sites beyond the effective range of interference from other colony members. It is likely that the process of recognition between parents and offspring begins in such sites, for it is not long before the young begin to make flights on their own and they are frequently fed on the wing. I have seen parent and offspring approach each other for transfer of food from a distance of at least 700 feet.

What of the mobbing behavior? At first consideration assault upon the young by adults would seem to be inadapative in the extreme. However, it undoubtedly serves a vital function in insuring maximum survival of young at a crucial period in their life history. In the first place mobbing amounts to little more than harassment. No bodily injury seems to result from such attacks. If martins do not recognize their own young, but respond only to a familiar site filled with pleading mouths, the presence of free-flying young about a colony calling for food might have a disruptive influence on the orderly process of recognizing one's own site and caring for the young that occupy it. Although site recognition in martins is highly developed, it is not perfectly expressed in terms of feeding one's own young. Occasionally a bird will offer food at a site other than its own. The presence of free-flying young about the colony soliciting all adults as they come and go could lead to confusion over territoriality and might lead to breakdown in the feeding system, to the detriment of the remaining nestbound broods.

Thus mobbing could be a device for driving the young away from the colony into isolation, where recognition cues, perhaps mutually adopted, could develop between parent and offspring. Once these bonds were established, orderly development could proceed until the young are fully independent.

5104 Newcastle Road, Raleigh, N. C.



BIRD WATCHERS'

Roundtable

Jay Carter is an outstanding representative of the younger birders in the Carolinas. A frequent contributor to *Chat* for the past 5 years, Jay finds time for bird banding in addition to extensive field work. He is probably best remembered by CBC members for discovering Swainson's Warblers breeding in Moore County.--HDP

Bird Finding at Southern Pines, N.C.

J. H. CARTER III

Southern Pines is located in the North Carolina Sandhills, in the south-central part of the state. It is easily accessible from the north and south by US 1 and US15-501, and from the east and west by NC 211. The land is characterized by gently rolling hills, many of which are covered with forests of longleaf and loblolly pine. Swamps along Drowning Creek and Little River strongly resemble the river swamps of the Carolina coast. The area also has open farming country and several lakes.

One of the best land birding areas is Weymouth Woods Sandhills Nature Preserve. The entrance is located on State Road 2074, about 2 miles SE of Southern Pines. It can be reached from Southern Pines by following Indiana Avenue out of town to SR 2074. Turn left and go about three-quarters of a mile. The entrance is on the left. The Preserve has an interpretation center, auditorium, and museum (not yet completed). In the pine woods around these buildings one can find Red-cockaded Woodpeckers, Pine Warblers, Brown-headed Nuthatches, and Solitary Vireos (summer only). Most of the trails leading down the hillside from the buildings go to the beaver ponds in the center of the Preserve. If you are lucky, you may catch a glimpse of a beaver. Wood Ducks can often be found on the ponds; and in summer there is usually a pair of Green Herons in the vicinity. A walk along the pond and swamp edges in the spring and summer can usually produce Acadian Flycatchers, American Redstarts, Prothonotary, Hooded, and Kentucky Warblers, and a good variety of other land birds. The pond edge is a good place to look for Winter Wrens in winter. During the fall such interesting warblers as the Blackburnian, Black-throated Blue, Black-throated Green, Chestnut-sided, and Magnolia can be found in the swampy areas and in the mixed deciduous-coniferous forests. A pair of Red-tailed Hawks reside in the Preserve area the year round, and can often be seen soaring

overhead. A good bird to look for in the mixed forests on the far side of the ponds is the Ovenbird. It does breed sparingly in the park; but it can be very hard to find, especially in mid-summer.

A good place for waterbirds is Thagard's Lake, which lies in the Whispering Pines community about 6 miles N of Southern Pines. To reach it, follow NC 22 to the crossroads just before you reach the Southern Pines-Pinehurst Airport. (Horned Larks can be found at the airport all year.) Turn right on SR 1843, then take the first paved road to the left (SR 1842). Follow this road onto SR 1802, and the lake will shortly appear on the left. Ring-necked Ducks, Hooded Mergansers, Mallards, Black Ducks, American Coots, and Pied-billed Grebes can usually be found on the lake during the winter. The best numbers of waterfowl can be observed just before dusk as ducks from the surrounding areas come in to roost on the lake. During the migrations, one can see American Widgeon, Blue-winged and Green-winged Teal, and an occasional Shoveler or Common Loon. Almost all the ducks that occur in the state have been recorded at Thagard's or at the other lakes in the vicinity, so you can never tell just what you are going to see for sure. Redheads, Canvasbacks, and Red-breasted Mergansers turn up occasionally; and on very rare occasions, Canada Geese, Common Goldeneyes, and Common Scoters have been recorded. A pair of Spotted Sandpipers breed at the back of the lake every summer, and there is a small colony of Barn Swallows under the bridge at the back of the lake. Tree, Bank, and Rough-winged Swallows (the latter breeding in the area) can often be seen feeding over the lake during bad weather in the spring. The lake is a good place to see migrating Ospreys also.

The swamps along Little River and Drowning Creek are rich in bird life, especially during the summer and migrations. These swamps are very large and dense, so people unfamiliar with the area should not attempt to enter them. People wishing to look for birds in these swamps can write J.H. Carter III, P.O. Box 891, Southern Pines, N.C. 28387 (Phone 692-7561). I will try to take you into the best areas and show you the bird or birds you wish to see. During the spring and summer, one can see Red-shouldered Hawks, Black Vultures, Pileated Woodpeckers, White-eyed Vireos, Black-and-white Warblers, Swainson's Warblers, Louisiana Waterthrushes, and numerous Prothonotary Warblers and redstarts. Wild Turkeys occur in the nearby Sandhills Wildlife Management Area, which cannot be entered without special permission.

Request for Cattle Egret Records

A survey of the northward movement of the Cattle Egret is being made to determine the distribution and post breeding movements of this species throughout its range. The following information is requested: Name, address of observer, date, time, number, location of observation (state, nearest town, county and if possible township, range and section), habitat, activities and weather. Please send records and observations to Alan B. Schroeder, c/o Norman Bird Sanctuary, Third Beach Road, Middletown, Rhode Island, 02840. Cooperators will be sent proper forms and a report of the results if requested.



Conservation

. . . with Marie Mellinger

The Ogres of Our Age

Conservation News for October coined a new word, "eye pollution," to refer to the unsightly billboards, conglomerations of old cars, rubbish, litter, and trash that we must look at along our highways and byways. Water pollution, sky pollution, noise pollution, and eye pollution, the four ever-growing ogres that haunt our land. Spring in a once fair land, becomes a nightmare of dumpyards and debris floating down once clear-flowing rivers. What are we going to do about these ogres?

When historian H.G. Wells visited the United States in 1942 he wrote that there should be a "ministry of foresight." Think how many of our present nightmares might possibly have been prevented had an enlightened citizenry been able to plan ahead. This is especially true of the coastal areas of South Carolina suddenly threatened with the invasion of a foreign chemical plant.

On 6 January disturbed citizens of the Hilton Head-Bluffton-Beaufort areas met for a conservation symposium and the discussion of the proposed Badische Anilin Soda Fabrik plant, or BASF for short. This first meeting with a debate between representatives of the company and local citizens was to try to get competent help and scientific leadership to fight BASF. It is feared that such a plant would increase pollution hazards, and further endanger natural coastal resources by upsetting the balance of nature. This is particularly significant in view of E.D. Golbert's statement (from the Scripps Institute of Oceanography) that "man is changing his environment much more rapidly than nature ever did, and the human race is running the risk of letting pollution change the temperature of the oceans and alter the earth's climate."

As an outgrowth of the Hilton Head Conservation symposium, a committee met on 17 January to form a South Carolina Conservancy. Officers are Robert P. Wilkins,

president; Adm. D.P. Polatcey, vice-president; and Orion Hack, treasurer. A constitution was worked out, and plans laid for the furtherance of the South Carolina Conservancy.

Something like this has been greatly needed in South Carolina and all citizens concerned about environmental problems and conservation should actively offer their support to the South Carolina Conservancy.

North Carolina has created a Conservation Council of 15 state and local conservation groups "to use legislative lobbying, court action, and public relations in campaigning for conservation measures." Arthur W. Cooper, professor of botany at North Carolina State University is president of this group. Such a council can be an effective clearing house for problems, and possibly eliminate duplication of effort by various agencies.

The House and Senate have agreed on provisions of the Endangered Species Bill and sent it to President Nixon. This bill prohibits importation of endangered fish and wildlife species and interstate shipments of reptiles, amphibians, and other wild life contrary to law. It is considered a significant step forward in the protection of rare and endangered species.

On 6 December still another hearing on the Chattooga River was held at Highlands, N.C., with a surprisingly large crowd in attendance. Many people spoke in favor of the inclusion of the Chattooga in the Wild and Scenic Rivers System. Only two people spoke against the plan, one a land owner afraid of higher taxes, and one a citizen who wished to promote development and the selling of lots along the river. Gov. McNair sent official South Carolina endorsement of the plan. A representative of Georgia Power, with the National Forest, the principal land owners along the Chattooga, also endorsed the inclusion of the Chattooga as a Wild and Scenic River.

A final hearing on the inclusion of the Chattooga as a Wild and Scenic River was held at Clayton, Georgia, 17 March. Again the testimony was overwhelmingly in favor of such inclusion, even the Corps of Engineers coming out strongly in favor of the proposal. Disagreement was mainly as to which sections of the River were to be listed as Wild, and which as Scenic. The consensus of opinion was to keep as much of the Chattooga in a Wild designation, as possible, even to taking away two of the present Forest Road bridges that span the river. This is a most significant action, and the best conservation news for this area in the last decade.

Walking catfish have been declared illegal in North Carolina, under inland fishing regulations adopted by the State's Wildlife Resources Commission. It is illegal to transport, purchase, possess, or sell any walking catfish. Now it only remains to tell the fish, themselves, not to walk into North Carolina.

And lest the season become too dark and gloomy to contemplate, spring is the time to attend a Wild Flower Pilgrimage, go to the Carolina Bird Club Meeting, join the nearest hiking club, become a member of the Ancient and Honorable Order of Squirrels or the Waterfall Watchers, or the Save the Turtle League. Whatever your particular thing, go to the woods and fields for the ever recurring miracle of a flower opening or a bird

Carolina Birds and Birders

. . . with Willie Morrison

On Caring for Abandoned or Injured Birds

Anne Worsham Richardson, the gifted professional artist ornithologist from Charleston, S.C., writes of her experiences with injured birds.

"The little gray screech owl we raised when the Charleston Museum sent it to us on May 27, 1968. A yellow bulldozer had cleared a lot in Mt. Pleasant and when a lady inspected the awful sight, she noticed a gray tuft of 'earth' moved near her foot. When she saw the large eyes she knew it was a downy owl nestling about three inches tall with a wobbly head and no hollow tree home. The orphaned owl was brought to me and we call it Owlbert II. The other (red) screech owl which came to me with a fractured skull, October 30, 1962, is entirely different. He is imprinted by us and is uninhibited--will even take a bath while we hold the water container.

"Many of my bird models have been disabled birds brought to the studio. One learns many things in attempting to fulfill the needs of different species, whether it be a Black-crowned Night Heron, a Hermit Thrush, an owl, or a tiny hummingbird. To protect its broken wing, a Ruby-throated Hummingbird was placed in an over-sized brandy snifter, containing honeysuckle intertwined in the glass which served as a perch and nectar from the blossoms supplemented with honey and water. He recovered and was released in about ten days.

"When a bird has thoroughly recovered from an injury, a U. S. Wildlife band is placed on its leg, the window opened, and the bird is released to fly away.

"April 17, 1969 I counted 26 Evening Grosbeaks at our feeders and about 21 on the 20th. I have just completed a painting of them. My first Painted Bunting of the season arrived on our feeder on Friday, 18 April. It was a beautiful male."—ANNE W. RICHARDSON, 7 Arcadian Park, Charleston, S.C., 29407

It Pays to Take That Second Look

"One of the greatest thrills for a birder is to see in your own baliwick a bird common in another area, but rare in your own. This happened to Leila Miles, Edmund Cuthbert and me on January 11 when we went for an impromptu picnic to Edmund's recently acquired acreage on Wadmalaw Island.

"The weather was definitely on the chilly side, but in spite of this we walked down the 'big road' to the Bear's Bluff gate hoping to scare up a few birds. Not finding any we decided to explore the Martin's Point road by car. About a half a mile from the main highway going north we stopped to look at a large flock of Red-winged Blackbirds, hoping to find a few Rustys among them.

"We were about to give up the search when Leila remarked that one seemed to have yellow on it. There in full view was a beautiful Yellow-headed Blackbird. It sat outlined against the sky for some minutes and we were all able to get a good look at it through binoculars. The Yellow-head has been seen a few times in this area, but it certainly cannot be called common. A new bird to add to our life list and such a beautiful one! Hence the thrill!"—MRS. ROBERT H. COLEMAN, 774 Ft. Sumter Drive, Charleston, S.C.

Low-country Bird Notes

Mrs. Martha Bee Anderson, Box 146, Hampton, S.C. 29924, writes:

The crown jewel of Low-country birds, the Painted Bunting (alias Nonpareil or Rainbow Bird), arrived early this spring in the Hampton area with first sightings reported on 7 April.

During July we watched with fascination as parents brought in two or three young birds for early morning and late afternoon feedings—free-loading on seeds scattered on the ground below our backyard feeders. It seemed to us that they feasted just as readily on the “baby chick and bird scratch feed” as they did on the more expensive wild bird seed mixture put out for them all spring. The last time that we glimpsed them on the feeders was in late August.

Summer Tanagers and Hairy and Downy Woodpeckers are greatly attracted to our suet feeders. These are baskets fashioned of hardware cloth and hung by wires from various tree limbs or fastened against tree trunks.

One of the real disappointments of years of birding has been our failure to lure Eastern Bluebirds to nest here. We have put up several houses to no avail. However, this summer we were rewarded in an unexpected way. We were amazed in mid-June to discover a pair of Great Crested Flycatchers nesting in a bluebird box. It was a treat to watch them raise their family and then fly away and leave us after the young were airborne.

After an absence of several months, the Baltimore Oriole splashed down in one of our bird baths in late September. The species had been plentiful in early spring, but absent all summer. The sudden reappearance in September perplexed us. We never determined whether he was coming or going!

[According to *South Carolina Bird Life* by Sprunt and Chamberlain, pages 497-499, Baltimore Orioles rarely nest in the Coastal Plain. They leave us in May for the Northwestern part of South Carolina and the mountains of western North Carolina for nesting purposes and return in September.-WMM.]

If anybody comes up with a sure solution to keep the squirrels out of bird feeders, all the bird-lovers (and feeders) of Hampton would like to know! They're eating us out of bird feed, at alarming rates of consumption, and it is discouraging lots of folks who've just quit because of the persistence of squirrels. Here we have tacked up foil pie-plates and such to deter them. We actually have only one feeder that is squirrel proof and it is under a special metal awning over the kitchen window.

A Report from Our Correspondent in the Mountains

Returning from a trip to the lower Rio Grande and Aransas just before Easter, we found on 9 April that a Red-breasted Nuthatch had adopted our feeder remaining with us for nine days.

We still had a few left-over Slate-colored Juncos and Purple Finches when, on 16 April, the first male hummingbird arrived, and on the same evening the first Whip-poor-will was heard and subsequently observed at close range on numerous occasions.

A transient Eastern Meadowlark, unusual on our wooded knoll, stayed until 5 May, the day the Indigo Bunting arrived. A pair of Broad-winged Hawks were first seen aloft 17 April and have remained in the area. By the end of April, while residents in town still reported the presence of Pine Siskins and Evening Grosbeaks, we had four constantly twittering hummers that by the middle of July had increased to eight.

On 15 May a Black Vulture soared above us and was subsequently seen in the adjacent woods. On the 17th the first brood of four young Eastern Bluebirds left the nestbox on an overcast afternoon. A second brood by the same parents was coaxed from another box on 12 July, by constant loud, wren-like chattering accompanied by rapid tail vibrating in which both parents took part.

On 17 May we heard and saw a Great Crested Flycatcher, Wood Thrush, and several Chimney Swifts, and on the 24th an Eastern Kingbird. During June Robins, Tufted

Titmice, Downy Woodpeckers, Catbirds, Mourning Doves, and Red-bellied Woodpeckers exercised their young around our home, much to our delight. Later in the month a pair of Blue-gray Gnatcatchers was seen repeatedly but nesting status is uncertain.

The supposedly spectacular spring migration of warblers continues to elude us. A Prairie Warbler seen on 24 April and a more often heard than seen Yellowthroat remained in the area. On the last day in July a Golden-winged Warbler eyed our feeder from an adjacent wire and 2 August a green-backed Tennessee did likewise. On the 27th we saw briefly a Magnolia and on the 28th a Canada and later a Pine Warbler. On the 31st we had occasional glimpses of a Cape May and an Ovenbird. On 2 September we saw the tiny Parula, another Cape May, and a Catbird, all held immobile by an overpassing Cooper's Hawk.

On 23 August Joe Schatz reported an Ovenbird and a transient Common Egret not otherwise seen in our area. Mr. Grimshaw reports migrating ducks passing overhead as well as sighting Bald Eagles in his vicinity.

At the end of September four young Cardinals were observed daily, confirming last year's observation that the Redbird is a late breeder, evidently preferring a summer-long courtship to the strenuous efforts of other birds trying to raise two or even three broods a year.

Since 2 October the Ruby-crowned Kinglet is seen daily. On the 4th a Pine Warbler, next day a Black-throated Green and a female Indigo Bunting, and on the 6th, a White-eyed Vireo.

On 24 September a friend in Hendersonville found a large dead bird and brought him to me for identification. After a great deal of searching through the bird books we decided that it must be a juvenile Florida or Common Gallinule. Actually the gallinule gave us a bit of trouble, because of its inert (hence shapeless) body and the fact that this was a new bird for us. In desperation I shipped the bird to the N. C. State Museum, tentatively identifying it as a juvenile Florida Gallinule. I was glad when Director Hamnett promptly confirmed my conclusion---thereby making me feel somewhat less of a nitwit!!!--RUFOLF G. HOSSE, Route 3, Box 287A, Hendersonville, N.C. 28739

ETV Life Science Class Program

Jacqueline Everington Jacobs, wife of a Columbia lawyer, Harold W. Jacobs, director and coordinator as well as teacher of "Life Sciences" of the Educational Television network from Columbia, S.C., was the speaker at a joint meeting of Garden Clubs in Hartsville, S.C., on 1 October 1969.

For an hour Dr. Jacobs showed movies and slides and answered questions about the "Nesting Birds of Coastal South Carolina" at Cape Romain National Wildlife Refuge. With editing, a sound track added with comments and credits, this material will be shown in April 1970 over ETV, Channel 7.

Dr. Jacobs, a Hartsville native, did her undergraduate work at Coker College, receiving a Bachelor's degree, with a major in biology. Over the years she has taught in the South Carolina public schools and at the college level while at the same time working for her Master's and Doctor's degrees in biology from the University of South Carolina.

Travis McDaniel, manager of the Cape Romain Wildlife Refuge, with an assistant, a cameraman from the ETV, and Dr. Jacobs, toured the islands of the Refuge 1 June 1969 on a routine inspection of the rookeries.

Bull Island may be reached by the motorist by following US 17 about 14 miles N of Mount Pleasant, making a right turn on Sewee Road and going about 5 miles to Moore's Landing where a boat makes scheduled trips to Bull Island three times a day. Inquiries about camping permits may be sent to Mr. Travis McDaniel, Manager, Cape Romain National Wildlife Refuge Headquarters, McClellanville, S.C. 29458.

The opening scenes of the movie show the salt marshes of Cape Romain interlaced by waterways that create the scores of islands used by the bird populations of the coastal area. Stops were made at Marsh Island to study the nesting colonies of Royal

(Continued on Page 29)

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[illegible]

CHRISTMAS BIRD COUNT—1969	COAST			COASTAL PLAIN				PIEDMONT												MTN.									
	Boats-Pea Island, N.C. 30 December	Morehead City, N.C. 21 December	Wilmington, N.C. 27 December	Charleston, S.C. 27 December	Hilton Head Island, S.C. 30 December	Beaufort Co., N.C. 21 December	Pamlico Co., N.C. 28 December	Rocky Mount, N.C. 4 January	Southern Pines, N.C. 22 December	Dillon, S.C. 26 December	Columbia, S.C. 27 December	Aiken, S.C. 1 January	Henderson, N.C. 30 December	Raleigh, N.C. 20 December	Chapel Hill, N.C. 21 December	Greensboro, N.C. 27 December	Winston-Salem, N.C. 27 December	Fredell Co., N.C. 24 December	Stanly Co., N.C. 3 January	Charlotte, N.C. 27 December	Greenville, S.C. 27 December	Piedmont, S.C. 30 December	Anderson, S.C. 29 December	Elkin-Ronda, N.C. 27 December	North Wilkesboro, N.C. 23 December	Caldwell Co., N.C. 27 December	Buncombe Co., N.C. 1 January	Great Smoky Mtn. Natl. Park—28 December	
Individual totals	7	340	45	74	69	17	65	28	1	17	17	22	177	42	4	5	17	*	*	2	*	12	35	—	—	—	—	—	35
Ipswich Sparrow	113	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Savannah Sparrow	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Grasshopper Sparrow	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sharp-tailed Sparrow	3	7	4	1	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Seaside Sparrow	33	3	3	26	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vesper Sparrow	69	6	3	6	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Slate-colored Junco	8,696	4	20	50	39	160	31	475	336	71	57	130	177	624	2	1,418	663	203	587	427	50	74	386	25	24	65	95	1060	—
Oregon Junco	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tree Sparrow	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Chipping Sparrow	271	10	1	68	40	4	3	2	6	12	6	75	10	2	2	1	1	—	3	—	—	—	—	—	—	—	—	—	—
Field Sparrow	2,460	20	130	24	8	41	32	8	84	4	41	184	10	102	146	160	145	110	175	79	25	188	446	97	5	—	—	—	—
White-crowned Sparrow	43	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
White-throated Sparrow	6,785	109	55	308	427	147	18	24	113	68	202	148	51	636	1677	428	489	155	211	119	23	77	115	320	39	57	16	358	—
Fox Sparrow	283	13	29	71	52	6	7	3	5	22	2	6	1	19	27	1	7	—	1	1	—	—	—	—	—	—	—	—	—
Lincoln's Sparrow	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Swamp Sparrow	658	90	40	49	55	6	8	9	7	4	2	17	—	59	133	66	15	8	4	1	—	28	57	—	—	—	—	—	—
Song Sparrow	3,236	118	116	80	72	15	20	7	41	46	64	42	5	214	753	564	247	74	32	52	5	94	120	27	10	10	31	321	—
Snow Bunting	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total number species	206	142	130	154	146	81	63	76	77	50	66	73	49	90	81	94	81	38	77	69	48	68	72	55	30	37	42	58	—
Total number individuals	893,370	37,350	14,834	14,970	36,850	14,854	6,016	3,161	3,526	941	14,530	14,077	1,557	617,545	10,254	10,198	16,535	2,057	6,556	9,714	763	9,399	31,012	1,968	866	833	1,375	5,613	—
Field observers	367	17	14	30	25	38	7	4	6	3	3	6	11	39	21	28	20	3	18	14	8	4	8	6	1	0	2	25	—
Yard observers	85	0	0	3	0	3	5	1	5	3	0	0	0	0	3	3	4	0	34	1	0	0	0	4	0	12	1	0	—
Field parties	130	6	7	7	6	12	4	2	1	2	1	2	2	7	12	11	6	2	7	6	4	2	4	3	1	0	2	9	—
Party-hours	1000+	60,25	40	74	54	?	23	14	10.5	25	8	19	25	6	74	71	91	48	11	89	37	36	21	22.5	45	9	17	66	—
Party-miles	4771+	122	148	466	260	?	109	234	201	35	145	128	?	273	190	411	225	110	190	259	66	272	356	70	23	—	107	273	—

* Seen in count area during count period but not on count day.

CHRISTMAS BIRD COUNT—1969

ELOISE F. POTTER

Northern finches seem to like southern hospitality. In addition to record or near-record numbers of Evening Grosbeaks, Purple Finches, and Pine Siskins, the 1969 Christmas Bird Count lists 55 House Finches (53 at Rocky Mount), 2 Common Redpolls (Bodie-Pea Island), 485 Red Crossbills (in 10 of 28 count areas from mountains to coast, but mostly W of fall line), 2 White-winged Crossbills (Smokies), 1 Oregon Junco (Winston-Salem), and 20 Snow Buntings (Morehead City). Along with the influx of northern finches came an unprecedented number of Red-breasted Nuthatches (417, compared to 176 in 1968 Christmas count) as well as many Golden-crowned and Ruby-crowned Kinglets.

The present count is also marked by an interesting assortment of stragglers including 1 Common Teal, Bodie-Pea Island; 1 Whip-poor-will, Wilmington; 1 Wood Thrush, Caldwell County; 1 Swainson's Thrush, Charleston; 13 Blue-gray Gnatcatchers, five localities; 1 Wilson's Warbler, Hilton Head Island; and 2 Blue Grosbeaks, Chapel Hill. Details of these and other noteworthy sightings will be found in the Compilers' Comments.

Count-day weather conditions were generally pleasant for the time of year except in western North Carolina where ice and snow undoubtedly curtailed coverage in several localities. The 367 field observers in 130 parties spent over 1,000 party-hours traveling approximately 5,000 miles in 28 count areas. The total of 206 species tallied falls only nine below the 1965 record of 215 species. Wilmington led the five coastal counts with 154 species, and Greensboro led the inland counts with 94. The total number of individuals (nearly 900,000) is considerably higher than in recent years because of a large blackbird roost in the Raleigh area.

COMPILERS' COMMENTS

BODIE-PEA ISLAND, N.C.: The adult male Common Teal (LO, PS, GW) was carefully studied with a 30X 'scope while in a raft of 100 or so Green-winged Teal. The total of 94 American Avocets may well be a record for the area in winter. The Common Redpolls (GSG, RHP) were seen at close range in good light. These along with the 24 Evening Grosbeaks, 393 Pine Siskins, and 14 Red Crossbills (JC, HL, RW) indicate an unusual concentration of northern finches in the area. The 7 Ipswich Sparrows are a record for the species in North Carolina on a count.—Paul W. Sykes Jr.

MOREHEAD CITY, N.C.: Thirty Knots were seen at Atlantic Beach 1 January by JF III and C.J. Spears. The high number of Laughing Gulls was due to the early count date. Two Ground Doves (JF III, BS, TW) had been present at Ft. Macon since 14 November. The 20 Snow Buntings (BS, TU) were on Elijah Lump, NW of Ft. Macon.—John Fussell III

WILMINGTON, N.C.: Female Whip-poor-will (LD et al.) was perched in a pine tree at Airlie Gardens. Several previous winter records not on count day. Parula Warbler (BD, FN) was at Airlie; Prairie Warbler (JP) was at Carolina Beach.—Dot Earle

CHARLESTON, S.C.: Whistling Swan (EAC et al.) is uncommon, but records are increasing. Swainson's Thrush (RB, ELB) was apparently a very late straggler. American Oystercatchers were apparently over twice as abundant as on prior counts; estimate carefully checked by EAC, PM, AMW. Bobolinks (RB, ELB) were one male and four females; previously recorded to 28 December.—E.B. Chamberlain

HILTON HEAD ISLAND, S.C.: The rare sighting of a Wilson's Warbler (ML) was confirmed on 1 January by Caroline Newhall. The bird was with kinglets, chickadees,

and White-throated Sparrows in roadside low brush beside a water-filled ditch. The Painted Bunting (Billie Hack party) was two or three weeks later than stragglers usually hang around island feeders. The White-crowned Sparrow (RFW) was a mature bird.
--Robert F. Whitney

BEAUFORT COUNTY, N.C.: Blue-gray Gnatcatcher (EB) at same feeder since early fall.--Geraldine Cox

PAMLICO COUNTY, N.C.: Lincoln's Sparrow had been at feeder since 23 December.--Geraldine Cox

ROCKY MOUNT, N.C.: The 53 House Finches (BD, JB, SB, LD, JLT) were in Rocky Mount near the library feeding on sweet gum balls in company with American Goldfinches. For the past month small numbers of House Finches have visited local feeders, but the large flock was a surprise. Mrs. Davis is familiar with the species.--John L. Thompson

SOUTHERN PINES, N.C.: Common Merganser (HL, EL) was a female. Spotted Sandpiper (JHC) in winter plumage was seen in flight; two found in same area after count. Red Crossbills (HL) were in pines at Weymouth Woods Nature Preserve, and one at bird bath in town.--J.H. Carter III

AIKEN, S.C.: Blue-gray Gnatcatcher (Knighton party).--William Post and Tom Rial

HENDERSON, N.C.: Eight House Finches were seen during the count period, adding a new species for the area.--Herbert E. Huggins

RALEIGH, N.C.: Red Crossbills (HL, EL, RT, ET, GT) were at Umstead Park and Lake Johnson. Bewick's Wren (DLW) was near out buildings of a Raleigh home situated on a large wooded lot. The Common Grackles and Brown-headed Cowbirds were in a roost.
--David L. Wray

CHAPEL HILL, N.C.: The total of 81 species exceeds the Christmas Count record of 77 set in 1966 count. Noteworthy finds were a Common Goldeneye (DB), two Turkeys (AWM, SL, JOP), a Yellow-breasted Chat (EW), two Blue Grosbeaks (JOP), and 28 Red Crossbills (several parties). Identification of the Blue Grosbeaks was firmly established by close studies before, during, and after count day by several competent observers.--Robert P. Teulings

WINSTON-SALEM, N.C.: House Finches (RS) have been visiting feeder since 20 December; two males carefully observed and photographed. Oregon Junco (RS) has returned to feeder for third year. --C. Royce Hough III

IREDELL COUNTY, N.C.: Red Crossbills are first record for county.--Mark Simpson Jr.

CHARLOTTE, N.C.: A brown-plumaged House Finch (JRN et al.) has been at the Norwood feeder since 6 December. The Red Crossbills (JRN, WS, et al.) have been almost daily visitors at the Norwood bird bath since 12 December, with 3 males and 5 females at bath at one time on count day. Another small flock was feeding in pine trees, and Smith saw a flock watering with siskins. The count of Rusty Blackbirds (WS) was unusually large for area, but no nearby roost indicated.--Joseph R. Norwood

PIEDMONT, S.C.: Redhead (MSA, CRG) was a first sighting for area.--Carl R. Garrison

ANDERSON, S.C.: Semipalmated Sandpipers (AMT et al.) were at Lake Hartwell feeding with Killdeer and Common Snipe. They are seen regularly here during migration, but have not been found on a previous Christmas count.--Adair M. Tedards

ELKIN-RONDA, N.C.: Red Crossbills (LH, FM, JT) are first record for area.--Lin Hendren

CALDWELL COUNTY, N.C.: Due to inclement weather with 6 to 8 inches of snow on ground, most birding was done in own yards. Unusual sightings were a Wood Thrush (Manchesters) and a Common Grackle (HM), the latter a lame bird.--Helen Myers

BUNCOMBE COUNTY, N.C.: This is the same count area formerly reported as "Swannanoa." Screech Owl was in a roosting box in Ruiz yard. Snipe (GGM) and large flock of Rusty Blackbirds and cowbirds were on Warren Wilson College grounds.--Robert C. Ruiz

GREAT SMOKY MOUNTAINS NATIONAL PARK, N.C.-TENN.: Drizzle or light rain all day. Snow on ground varying from 4 inches in lower elevations to 22 inches in higher elevations. --Richard C. Zani

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IREDELL COUNTY, N.C.: Lois T. Goforth, Marcus B. Simpson Jr., Brenda Templeton.--Marcus B. Simpson Jr., P.O. Box 167, Statesville, N.C.

STANLY COUNTY, N.C.: Erin and Roy Blalock, Jack Carnegey, Margaret Crawley, Fred Cornwright, Barrett and Vera Crook, Charles and Mary Crump, Richard, Pauline and Myrtle Crump, Nelle Dotson, Nina Eudy, Virginia Foglia, Mattie and Rudy Gereg, Naomi Goforth, Gertrude and Louis Hartung, LECTIE Harwood, Louise Hammill, Ann Hatley, Claude, Nelle and Frances Hinton, Barbara, Jean and Marvin Huneycutt, Maxine and Myrtle Isenhour, Vera

Littleton, Fisher and Wilmetta Maner, Gladys and Vera Mason, Susan Manly, Bessie and Heath Morgan, Doris and James Mauney, Annie Misenheimer, Grace and Harold Morris, Boyd Newsom, Anne Olsen, Ervin and Glenda Poplin, Louise Rice, Nina Sweacker, and Bennie Winget.--Mrs. John U. Whitlock, Box 99, Albemarle, N.C. 28001

CHARLOTTE, N.C.: Jimmy Bookout, Mrs. E.O. Clarkson, Mrs. W.G. Cobey, Mr. and Mrs. A.H. Dykema, J.P. Hamilton, Bowman Kelly, Mrs. A.A. Kittinger, Mrs. T.L. Millwee, Mr. and Mrs. J.R. Norwood, Mrs. George C. Potter, William Smith, Mr. and Mrs. R.D. Wilson (Mecklenburg Audubon Club).--Joseph R. Norwood, 1329 Goodwin Avenue, Charlotte, N.C. 28205

GREENVILLE, S.C.: Ruth Gilreath, Gladys Hart, Lillie Hart, Rosa Lee Hart, Mamie Kanaley, Martha Lawrence, William Lawrence, May Puett.--Rosa Lee Hart, Route 1, Travelers Rest, S.C. 29690

PIEDMONT, S.C.: Michael S. Anderson, Carl R. Garrison, Adair M. Tedards, Chris Williams.--Carl R. Garrison, RFD 4, Box 228, Easley, S.C. 29640

ANDERSON, S.C.: Michael Anderson, Carl Garrison, Joan Geiger, Susan Geiger, Adair M. Tedards, Caroline Watson, Robert Watson, Chris Williams.--Adair M. Tedards, Route 4, Box 157, Easley, S.C. 29640

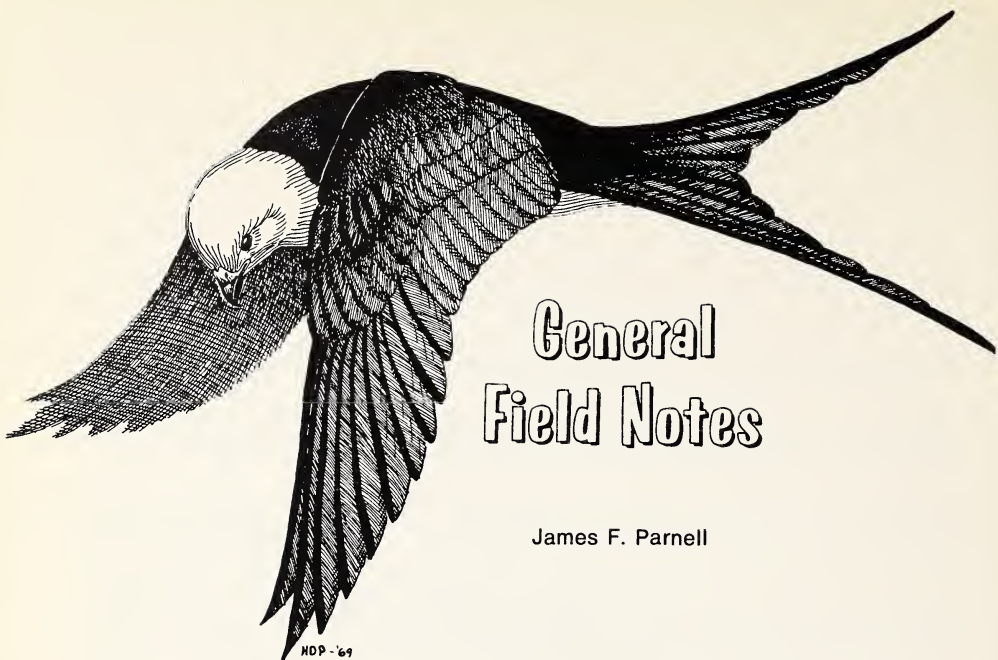
ELKIN-RONDA, N.C.: A.G. Biggs, Bill Blackburn, W.F. Burgess, Lin Hendren, Ola Hendren, Fred Masten Jr., L.H. Petree, W.P. Smith, Jerry Tysinger, James Uldrick.--Lin Hendren, Box 148, Elkin, N.C. 28621

NORTH WILKESBORO, N.C.: Wendell P. Smith, 911 E Street, North Wilkesboro, N.C. 28659

CALDWELL COUNTY, N.C.: Mr. and Mrs. W. E. Alexander, Mrs. Murray Bruner, Lois Laxton, Mr. and Mrs. E.M. Manchester, Mr. and Mrs. Fred May, Helen Myers, Mr. and Mrs. Lee Whitman, Miss George Wilcox.--Miss Helen Myers, 310 Beall Street, Lenoir, N.C. 28645

BUNCOMBE COUNTY, N.C.: G. Gordon Mahy, Betty M. Ruiz, Robert C. Ruiz.--Robert C. Ruiz, 300 Wilson Avenue, Swannanoa, N.C. 28778

GREAT SMOKY MOUNTAINS NATIONAL PARK, N.C.-TENN.: Winnifred E. Brown, Danny Ellis, Maurice Grigsby, David Hassler, Robbie Hassler, Joseph C. Howell, Greg Jackson, Tony Koella, Mrs. George McGown, Kevin McGown, Mary McIlwain, Robert A. Monroe, Mrs. Robert A. Monroe, Louise Nunnally, Pauline G. Ryder, Richard Ryder, Terry Satterfield, Mrs. Terry Satterfield, Johneta L. Smith, Louis F. Smith Jr., Bill Williams, Irene Williams, George Wood, Hedy Wood.--Richard C. Zani, Route 1, Box 10, Gatlinburg, Tennessee 37738



General Field Notes

James F. Parnell

Anhinga Breeding at Springfield, S.C.

WILLIAM POST

Department of Zoology

North Carolina State University, Raleigh, N.C.

19 August 1969

On 20 July 1969 while visiting the Springfield, S.C., heronry in northern Barnwell County, Frederick Post, William Hastings, and I found a nest of the Anhinga (*Anhinga anhinga*). It was near the top of a 10 meter (30 foot) high Bald Cypress (*Taxodium distichum*). As we approached, the two young flew from the nest and plopped into the water, and were obscured from our view by the vegetation. The adult birds were sailing overhead. I did not find the Anhinga nesting in this colony in 1968.

I know of no breeding records for either Aiken or Barnwell Counties. *South Carolina Bird Life* (1949) does not clearly delineate the breeding range of the Anhinga in South Carolina.

Rattlesnake Predation on the Clapper Rail

GILBERT S. GRANT

Route 1, Box 363, Sneads Ferry, N.C.

19 June 1969

On 27 May 1967, while walking between Alligator Bay and the beach on the northern end of Topsail Island, in Onslow County, N.C., I collected a Canebrake Rattlesnake (*Crotalus horridus atricaudatus*). It measured 4 feet 2 inches in length and 5.75 inches in girth. Dissection revealed the upper mandible of a rail comparable in size to that of either a Clapper Rail (*Rallus longirostris*) or a King Rail (*Rallus elegans*) and the fur and partially digested bones of a small rodent. Preference for salt marshes by the Clapper Rail indicated that it was probably this species that was taken by the rattlesnake.

Bent (US Natl. Mus., Bull. 135, 1926) states that the enemies of the Clapper Rail (all subspecies included) are hawks, owls, minks, raccoons, wild cats, turtles, fish, man,

crows, and crabs. The predation of a Clapper Rail by a Canebrake may not be unusual, however, as both are found at the edge of the salt marshes during periods of high tide. I know of no previous recorded evidence of this interesting predator-prey relationship, however.

An Early Record of the Saw-whet Owl From Western North Carolina

MARCUS B. SIMPSON JR.
P.O. Box 167, Statesville, N.C.

10 June 1969

Pearson, Brimley, and Brimley (*Birds of North Carolina*, 1942) state that North Carolina's first record of the Saw-whet Owl (*Aegolius acadicus*) was based on a mounted specimen which H.H. Brimley obtained at the Fish and Oyster Fair in New Bern during February 1892. The exact origin of this bird was uncertain, however, for the authors pointed out that the owl "*presumably* had been killed in the state" (*italics mine*). Apparently the first specimen conclusively taken in the state was collected by John S. Cairns of Weaverville, Buncombe County, on 30 November 1894. In a letter to William Brewster dated 11 March 1895, Cairns mentions having collected a female Saw-whet Owl; and subsequently the specimen was given to Brewster, for Raymond A. Paynter Jr. (pers. com.) informs me that the bird is now in the collection of the Museum of Comparative Zoology at Harvard University, where it is listed as accession No. 247,615. In addition to being the earliest positive North Carolina record, this specimen represents one of the only two autumn and winter observations of the owl from the mountain region of the state, the other being Peake's record on 26 October 1963 in Jackson County (*Chat*, 29:110-111, 1965).

Barn Swallow Observations In Great Smoky Mountains National Park

H. DOUGLAS PRATT
Route 3, Box 113L, Charlotte, N.C. 28210

26 December 1969

According to Stupka (1963) the Barn Swallow (*Hirundo rustica*) is an uncommon migrant and possibly a rare summer resident in the Great Smoky Mountains National Park. As a result of observations made by me during the summer of 1969, it would seem that the status of the Barn Swallow in the park needs to be revised. Stupka lists no records for the North Carolina portion of the park. All of the following observations are from North Carolina.

On 9 June I discovered a nest with three almost-fledged young Barn Swallows on the porch of the Park Service Seasonal Quarters at Oconaluftee. This constitutes the first breeding record for this species within the park. Subsequently, other nests were located in the vicinity. Barn Swallows were present in the Oconaluftee area throughout the summer months of June, July, and August. A population estimate for the area would be about 150 birds.

On 7 August I observed a large flock (ca. 50) in flight near the Lone Pine Lookout on the Noland Divide Trail. The weather was clear, and the time was 4:00 PM. The birds appeared to be taking advantage of the updrafts of air over Noland Divide. In addition to the Barn Swallows, the flock contained Chimney Swifts (*Chaetura pelagica*). There is no evidence that these birds represent breeding birds in the park. Indeed, suitable nesting sites for these species are lacking in the Noland Divide section of the park. This is evidence, however, that the Barn Swallow uses the park as a feeding ground even though actual nesting may be limited.

A Tufted Titmouse Nest Attended by Carolina Chickadees

JAMES O. PULLMAN
Route 2, Box 68, Chapel Hill, N.C.

20 September 1969

In late April 1969 I found two nests under construction on Morgan Creek at the Mason Farm near Chapel Hill, N.C. Carolina Chickadees were building in an overhanging stub about 4 feet above the water, while Tufted Titmice were carrying nesting material into a natural cavity in a beech tree 30 feet downstream.

I next visited the site on 17 May and, as expected, found the titmice delivering food to their young, whose cries were quite audible. The chickadee nest was inactive having, apparently, failed. I was surprised however to see a chickadee delivering food to the titmouse nest!

Further observation on this date, and again three days later, showed the following: Two titmice (presumably a pair) delivered food to the nest. There were two chickadees in the vicinity, but I could not prove that more than one of them brought food. I watched as 10 fecal sacs were removed from the nest, all by titmice. If the chickadees assisted in feeding the young, they apparently did not contribute to "housekeeping."

The frequency of nest visits by the two species was about equal, but their behavior in approaching the nest was quite different. The titmice generally flew directly to a perch in front of the nest hole, while the chickadees approached by degrees, often pausing at two intermediate points.

When the two species met at the nest, the titmice were clearly dominant; but in a number of such episodes, I never saw a vigorous conflict. The titmice, typically, would deliver a mild threat. The chickadee would then retire to a distance of about 15 feet, to return immediately when the titmouse had departed. Strangely, the presence of an observer seemed of much greater concern to the chickadees than the titmice. The former often settled over my head and scolded me while the latter were largely oblivious to my presence.

On 21 May after observing the nest for 90 minutes, I saw for the first time two immature titmice at the entrance of the nest hole. Fifteen minutes later, at 7:30 PM, one flew from the nest to a perch 20 feet away. Three more left at 7:40, 7:47 and 7:48 respectively. The parents had been absent as the first two of the young departed, but then returned and showed great excitement during the remainder of the episode, giving calls and flying beside the young.

Several minutes later, a chickadee entered the nest with food, but emerged with same and flew to a perch 2 feet away. He then repeated the performance twice again, perch to nest to perch to nest, until a titmouse appeared and drove him off.

It would have been interesting to see if the chickadees continued to feed the young titmice outside the nest, but darkness was approaching. I saw one chickadee pass within 2 feet of a titmouse with no exchange of food. Again, a chickadee approached, but was this time driven off by an adult titmouse. However the chickadees were clearly carrying food, and were clearly circulating around the young titmice, not in the vicinity of the nest.

My next opportunity to visit the nest site came on the morning of 25 May, when I found neither species near the nest.

Circumstantial evidence would suggest that, when the chickadee nest failed, the parental drives of the chickadees were transferred to the benefit of the nearby titmouse nestlings.

Behavioral Notes on Mockingbirds And Black Rat Snakes

JAMES E. HUHEEY

Department of Chemistry, University of Maryland, College Park, Md. 20742

The recent report of wing flashing by a Catbird in response to a Black Rat Snake (E.F. Potter, *Chat*, 32:103) prompts me to report a similar incident. On 17 May 1969 I observed unusual behavior by a Mockingbird (*Mimus polyglottus*) about 100 yards E of Sandy Point on the Patuxent River, Calvert County, Maryland. The Mockingbird was wing flashing and fluttering a few feet off the ground and rapidly approaching me. At a distance of perhaps 50 feet I could discern the object of the bird's attention, an adult Black Rat Snake (*Elaphe obsoleta obsoleta*). I detected no vocalization on the part of the Mockingbird. A Purple Martin (*Progne subis*) from a nearby housebox was attracted by the commotion, but did not take part in the wing flashing. The birds broke off the engagement as the snake continued towards me.

It is of interest that Potter observed this type of behavior by the Catbird (*Dumetella carolinensis*) and what might be called "incipient" behavior by a Brown Thrasher (*Toxostoma rufum*). The present observation represents a third species of the Mimidae.

A second point of interest is that the Black Rat Snake harassed by the Mockingbird was the third I had observed that morning and each, insofar as I could tell, followed the same path from a low, swampy area through a lawn (recently converted from a cornfield). This is strong circumstantial evidence for "tracking," presumably by olfaction, of the first snake by the latter two. A previous observation of this type was made by Stupka (J.E. Huheey and A. Stupka, *Amphibians and Reptiles of Great Smoky Mountains National Park*, Univ. of Tennessee Press, Knoxville, 1967, p. 64). Stupka's observation was on 15 May 1953 coinciding remarkably with mine and with the known breeding season of this species (K.P. Schmidt and D.D. Davis, *Field Book of Snakes*, G.P. Putnam's Sons, New York, 1941, p. 150, give May 25 and June 19; A.H. Wright and A.A. Wright, *Handbook of Snakes of the United States and Canada*, Vol. I, Cornell University Press, Ithaca, N.Y., 1957, p. 233, state "May 25 . . . to June 12 . . ."). The snakes were collected, preserved, and examined internally. The first snake was a female and the following two were males, consistent with the trailing hypothesis.

Spring Movement and Behavior Of Loggerhead Shrikes at Raleigh, N.C.

WILLIAM POST

Department of Zoology

North Carolina State University, Raleigh, N.C.

19 September 1969

For a number of permanent resident species that do not congregate during migration, and are generally thinly distributed at all times of year, it is difficult to ascertain migratory movements except in closely monitored areas. The Loggerhead Shrike (*Lanius ludovicianus*) is such a species.

During the winter 1968-1969, I was conducting a study of the bird populations of a suburban area of Raleigh. Observation and mist-netting failed to reveal the presence of any shrikes in my study area (about 65 acres).

On 3 and 4 March five Loggerhead Shrikes appeared in the area. The first, a single bird, suddenly appeared in my yard on 3 March. I was banding birds and had one 12 m net open. I left the net for about 10 minutes. On returning, I discovered the shrike perched on top of the net. I watched it while it then made an attack on a Slate-colored

Junco (*Junco hyemalis*) in the net. The junco gave a distress call, and I intervened before the shrike could harm it. The shrike left, but to my chagrin I discovered 2 dead Pine Siskins (*Spinus pinus*) in the net. The shrike had killed them in my brief absence. I then removed all live birds from the net and waited for the shrike. In 5 minutes it returned and made three more passes at one of the dead siskins. It hit the siskin with its feet, but when the siskin stayed in the net, the shrike fell back to the ground and sat for several seconds, and then flew off. Twice again it hit the siskin, and failing to dislodge it, flew up in a pecan tree nearby. The shrike then left the immediate area. An hour later, it returned and managed to behead one siskin in the net. I saw it fly off with the head. A half hour later it returned, but didn't make a pass, although it perched in the pecan and seemed to watch the net. It stayed in the general area another 15 minutes, and its presence was accompanied by the scolding of chickadees, goldfinches, House Sparrows (about 15 formed a flock and followed the shrike about at a distance), Robins, Mockingbirds (who didn't chase the shrike), and Downy Woodpeckers, who got the closest to the perched shrike, although they kept behind branches.

On 4 March Micou Browne and I saw two Loggerhead Shrikes at Lake Boone, also in the study area and near my yard. One shrike was captured in a mist net when it attempted to capture a White-throated Sparrow (*Zonotrichia albicollis*). It had already succeeded in dispatching a Swamp Sparrow (*Melospiza georgiana*) in the net. This shrike was collected. It was a female (ova 10 mm x 4 mm) *L.L. ludovicianus*. This is the resident race in Wake County, although this is near the northern edge of its range. After 10 March no more shrikes were seen in the area. This indicates that there is an early March movement of this race, probably of birds breeding slightly to the north.

Some points may be made about the behavior of Loggerhead Shrikes around mist-netted birds: 1) When the shrike was unable to extract killed prey, its attention switched to other netted birds; 2) Shrikes killed netted birds by biting into the neck and base of skull; 3) The shrike made repeated attempts to dislodge prey, and returned as much as 1 hour later; 4) The shrike took away part of the victim when it could not get the whole carcass.

I want to thank Roxie Laybourne of the Smithsonian Institution, who made the subspecific identification of the shrike.

A Seasonal Change in Roosting Behavior

FRED L. JOHNS

Department of Zoology

North Carolina State University, Raleigh, N.C.

5 February 1969

During the winter of 1967-1968 I noticed that House Sparrows roosted in various deciduous trees in the fall, but did not roost in these same trees in the winter season.

Below are my notes, abbreviated, for the fall of 1968 describing changes in the roosting behavior of a mixed flock of House Sparrows and Starlings on the North Carolina State University campus.

1-13 October -- About 120 House Sparrows and 30 Starlings roosted in four of seven American elm trees (40 feet high) planted in a row next to the College Union. Individual birds would flit back and forth among the trees, continually chattering, until about ½ hour after sundown. I found no Starlings or sparrows roosting in nearby evergreens.

14 October -- First leaf coloration noted in elms. No change in bird behavior.

21 October -- One third of leaves are in full color and some leaf-fall is evident. No change in bird behavior.

28 October -- All leaves colored, 1/3 of leaves have fallen (visual estimate). No change in bird behavior.

4 November -- One half of the leaves have fallen. There appears to be more

restlessness and chirping prior to settling down for the night. Evergreens still not in use.

11 November -- No change in behavior from 4 November. Leaf-fall is nearly complete.

12 November -- High winds prevailed all day and well into the night as a weather front passed through Raleigh. No birds are roosting in the elms. The mixed flock is now in the evergreen magnolias (30-40 feet tall), about 125 yards to the south of the elms.

13 November -- The weather is calm, but the birds are roosting totally in the evergreens.

18 November -- The main body of the flock shifted to other trees within the row of evergreens, but none returned to the nearby deciduous trees.

20-23 November -- No change in bird behavior.

This flock of birds preferred deciduous to evergreen trees for autumn roosting even when leaf-fall of deciduous trees was nearly complete. A change in weather initiated the shift to roosting in evergreens, and after passage of the front the flock did not return to roosting sites in deciduous trees.

Summer Record of the Scarlet Tanager In Wake County, N.C.

HARRY E. LeGRAND JR.

331 Yadkin Drive, Raleigh, N.C.

3 September 1969

This summer while birding at William B. Umstead State Park in northwestern Wake County, my brother Edmund and I saw and heard Scarlet Tanagers (*Piranga olivacea*) on several occasions. Our first summer record of this species from Wake County came when Edmund found a dead male on a road in the park on 9 June 1969. On 22 June I observed two males, both singing. Edmund and I again found three birds in the park on 28 June. All were singing males, and two were in the same locations as on 22 June. Another trip to the park on 19 July yielded three singing males. Finally, on 23 August a single female or immature bird was seen. Despite the several observations of singing males no positive evidence of nesting was found. All birds mentioned above were in medium growth mixed woodlands.

In addition to the sightings in Umstead Park, a single bird was heard singing on 3 July 1969 about 10 miles N of Raleigh.

These records seem to indicate that the Scarlet Tanager is present in some numbers throughout the summer in northwestern Wake County. Several other recent unpublished summer reports of Scarlet Tanagers in Wake County support this idea. Scarlet Tanagers are presently known to breed to some extent in North Carolina east to Durham County (*Birds of North Carolina*, 1959). R.H. Siler (*Chat*, 27:57, 1963) found an active nest in Wayne County, N.C., at Cliffs of Neuse State Park in June 1963.

An Unusual Nest Site of the Slate-colored Junco

MARCUS B. SIMPSON, JR.

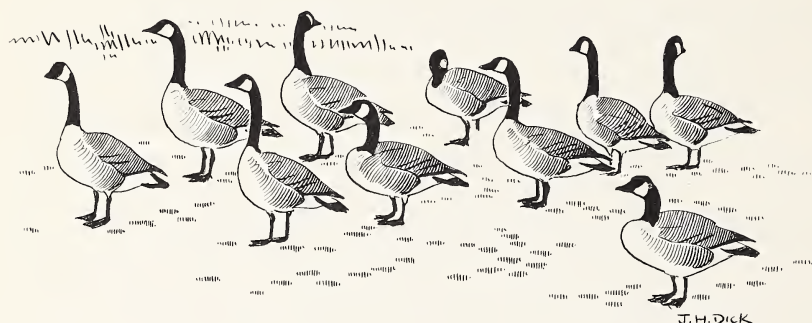
P. O. Box 167, Statesville, N.C.

27 July 1969

On 12 June 1969 James White discovered a nest of the Slate-colored Junco (*Junco hyemalis*) inside a roof drainage gutter on the north side of the main laboratory building at the Highlands Biological Station, Highlands, N.C. The gutter and nest were situated 9 feet and 5 inches above the ground, and on first examination 3 eggs were noted. Considering the heavy rainfall at Highlands, the choice of such a site seemed particularly unusual and precarious, so I checked the nest on three subsequent occasions to determine its fate. On 16 June one blind, naked nestling was present and no trace of any

of the eggs remained. By 24 June the nestling was well feathered and occupied practically the entire nest; and on 27 June the young bird had left the nest and was seen in a nearby shrub.

As pointed out by Stupka (*Notes on the Birds of Great Smoky Mountains National Park*, 1963) the Junco ordinarily nests on the ground, choosing the edge of a bank, rock ledge, or the base of a tree trunk for its building site. Occasionally, nests are placed in trees or shrubs, however, ranging as high as 30 feet, according to Ganier (*J. Tenn. Acad. Sci.*, 1:31-40, 1926). Apparently the only records of the birds' utilizing sites other than the ground or low vegetation were reported by Sprunt (*Auk*, 41:610-612, 1924; *Auk*, 47:568, 1930) who described three such nests: one in a tin can at the edge of a tennis court, another on the rafter of a garage, and a third in a fern basket, all 3 records coming from Blowing Rock, N.C.



Briefs for the Files

Compiled by JAMES F. PARNELL

(all dates 1969 unless otherwise listed)

COMMON LOON—One was present near North Wilkesboro, N.C., on the Kerr Scott Reservoir between 10 September and 1 December, Wendell Smith.

RED-THROATED LOON—One was inland at Raleigh, N.C., on 6 December, Robert Hader.

HORNED GREBE—Flocks of 12 and 35 were found near Raleigh on 22 November by Robert Hader.

GREATER SHEARWATER—A single bird found freshly dead on the beach at Avon, N.C., on 3 November was late for North Carolina waters, Kenneth Parkes.

DOUBLE-CRESTED CORMORANT—Individuals were seen near Raleigh on 28 October and on 11 and 12 December by Robert Hader.

WHITE IBIS—Three immature birds were found well inland at High Point, N.C., on 14 August by David Burney and John Austin, with single birds seen there on 23 August and 13 September by James Mattocks. Two were also found at Raleigh on 16 August

by Harry and Edmund LeGrand, and one was seen there on 23 August by Robert Hader.

GLOSSY IBIS—Ten were late on 28 November at West Onslow Beach, N.C., Gilbert Grant.

WOOD IBIS—Small numbers were seen regularly in late August at Ocean Drive Beach, S.C., by Jackson M. Abbot.

COMMON EGRET—One, apparently sick, was found on 4 January 1970 at Lake Wheeler near Raleigh by Mike Browne, Gilbert Grant, and Darryl Moffett.

CATTLE EGRET—One was late at Ocracoke, N.C., on 2 November and at the Pea Island Natl. Wildl. Refuge just south of Nags Head, N.C., on 16 November, T. F. Wisboldt.

BLACK-CROWNED NIGHT HERON—A late bird was found on 2 November at Lake Wheeler near Raleigh by Harry and Edmund LeGrand.

WHISTLING SWAN—One adult and 1 immature bird were found at Lake Benson near Raleigh on 15 November and 13 December by Robert Hader. Two were present on Lake Baggart in Richmond County, N.C., on 21 November, seen by Lyles Morgan and reported by Jay Carter.

SNOW GOOSE—A single Snow Goose in company with a Blue Goose was found at Wrightsville Beach on 24 November by Dot Earle and Kitty Kosh.

AMERICAN WIDGEON—One was seen at West Onslow Beach, N.C., on 8 September was somewhat early, Gilbert Grant.

GREEN-WINGED TEAL were early at Ocean Drive Beach, S.C. on 18 August, Jackson M. Abbot.

HOODED MERGANSER—One was seen daily on a farm pond near Chapel Hill, N.C., between 19 and 23 June by James Pullman.

RED-BREASTED MERGANSER—Four were very early at Ocean Drive Beach, S.C., on 22 August, Jackson M. Abbot.

BALD EAGLE—Three were seen at the Lake Mattamuskeet Natl. Wildl. Refuge near Swan Quarter, N.C., on 7 to 9 November by the ornithology class of N.C. State University and reported by Jay Carter. A single eagle was seen there on 25 November, James Parnell. A single eagle was also seen by Eugene Pond between Davis and Stacy in eastern North Carolina in late December.

PEREGRINE FALCON—A single bird was found on 25 August at Cedar Island, N.C., by Jackson M. Abbot. At the Pea Island Refuge Royce Hough observed an immature Peregrine Falcon with a Cattle Egret kill during the second week of October.

WHITE-RUMPED SANDPIPER—Several small flocks numbering at least 30 individuals were found at Pea Island between 10 and 12 October by Royce Hough.

DUNLIN—Five were found inland at High Point, N.C., on 25 October by James Mattocks.

STILT SANDPIPER—Approximately 45 were found at the Cape Hatteras National Seashore on 11 October by Harry and Edmund LeGrand.

LONG-BILLED CURLEW—One was found at Fort Fisher just south of Carolina Beach, N.C., on 2 and 3 November by James Pullman.

NORTHERN PHALAROPE—One was found inland at High Point on 25 October by James Mattocks.

BONAPARTE'S GULL—Six were found inland near Raleigh on 14 November by Robert Hader.

RING-BILLED GULL—One adult and 2 immatures were seen in the North Carolina mountains at Swannanoa on 19 September by Bob Ruiz.

BLACK TERN—One was early at Raleigh on 20 June, Robert Hader; as was one at Georgetown, S.C., on 6 July, John Cely.

DOVEKIE—One found dead on the highway about 1½ miles S of Salvo, N.C., on 3 November was the only early winter record received, Kenneth C. Parkes.

RED-BREASTED NUTHATCH arrived early in North Carolina. They were first found on 24 September at Raleigh by Harry LeGrand and on 27 September at North Wilkesboro by Wendell Smith.

BANK SWALLOW—Thirty-six were seen near Bullock in Granville County, N.C., on 9 July by Carl Johnson and Gilbert Grant. A flock of 50 was found near Raleigh on 9 and 10 August by Harry LeGrand.

BARN SWALLOW—Three were late at the Pea Island Refuge on 4 November, Kenneth C. Parkes.

SHORT-BILLED MARSH WREN—At Raleigh 2 were seen on 21 September and 2 on 30 September by Harry LeGrand. One was found there on 18 October by Robert Hader. At Southern Pines a single bird was found on 23 August by Jay Carter.

ROBIN—Eight nests were found at Greenfield Lake in Wilmington during the summer of 1969 by Kitty Kosh. This species appears to be increasing in numbers as breeding birds at Wilmington.

EASTERN BLUEBIRD—A male was seen carrying nesting material to a box at Swannanoa, N.C., on 26 and 28 October while a female perched nearby, Bob Ruiz.

WHITE-EYED VIREO—One was late at Chapel Hill on 8 November, Robert Teulings.

PROTHONOTARY WARBLER—One found at Raleigh on 24 September by Harry LeGrand was somewhat late.

SWAINSON'S WARBLER—A bird found dead at a Raleigh TV tower on 20 September was only the second local record, Will Post.

NASHVILLE WARBLER—Individuals were seen at Chapel Hill on 10 and 14 September by Robert Teulings and on 21 September by James Pullman.

YELLOW WARBLER—Eight were seen on the late date of 21 September by Harry and Edmund LeGrand at Raleigh; and 2 were at Southern Pines on 5 October, Jay Carter.

CERULEAN WARBLER—One was seen at North Wilkesboro on 14 September by Wendell Smith.

CONNECTICUT WARBLER—One at Chapel Hill on 4 October was very unusual, James Pullman.

YELLOW-BREASTED CHAT—One on 9 November at Chapel Hill was very late, Robert Teulings.

BROWN-HEADED COWBIRD—A single egg was found in the nest of a Yellowthroat on 1 June at Sneads Ferry, in eastern North Carolina. An adult male Yellowthroat was seen feeding a young cowbird in the same vicinity on 14 June, Gilbert Grant. On 27 May a Yellow-throated Warbler was seen feeding a cowbird at Wilmington, Kitty Kosh.

SCARLET TANAGER—A male in breeding plumage was seen singing on 9 July about 30 miles S of Charlotte, N.C., in the Landsford Canal area by Louise Lacass and Betty E. Moore.

BLUE GROSBEAK—A single bird was late at Chapel Hill on 1 November, Robert Teulings.

LARK SPARROW—A single adult was found at the Wright Memorial near Nags Head, N.C., on 9 and 10 November by James Pullman.

LINCOLN'S SPARROW—One was seen daily between 16 March and 12 April at Merritt, N.C., by Geraldine Cox. A single bird was also found at Chapel Hill on 2 October by Robert Teulings.

SNOW BUNTING—Unusually large numbers were found along the North Carolina coast in early November. Twelve were at Ocracoke on 2 November, 30 were at the Pea Island Refuge on 3 November, and 30 were at Oregon Inlet on 4 November, Kenneth C. Parkes. At Wrightsville Beach 18 were found on 5 November by James Pullman.

CORRECTION: The brief concerning Common Mergansers at Southern Pines in the June 1969 *Chat* should read: **RED-BREASTED MERGANSER**—Nine females were found inland at Southern Pines, N.C., on 1 December 1968 by Jay Carter.

CAROLINA BIRDS AND BIRDERS

(Continued from Page 9)

Terns and Laughing Gulls along the sand above high tide. Brown Pelicans prefer grassy higher areas where they can build their nests on the ground but add marsh grass and debris washed ashore. The terns just scoop out a depression in the sand to lay their single eggs, while the gulls build their primitive nests out of sedges and grasses.

Two to three dozen slides were shown of colonies of various species, adults, nests with eggs, and young birds from newly hatched to covered with downy feathers. On White Banks were the Snowy Egrets and Louisiana and Little Blue Herons that nest close together. Their eggs resemble each others and even the experts are not sure which is which when parents are away from the nests.

Other interesting facts of this refuge were mentioned, illustrating the year round use of these islands by various species. There are large wintering populations of a dozen different kinds of ducks with the Wood Duck being the only permanent resident. Coots and Common Gallinules are commonly seen feeding in the freshwater ponds with frequent glimpses of alligators sunning near the edges. On Bull Island wild Turkeys wander through the woods and appear on the edge of clearings or woodland roadways. In the trees overhead are the little known black fox squirrels perched on limbs watching the transients wandering along the paths.

Dr. Jacobs told of another trip, with a photographer, to Cape Island to record the arrival of the giant sea turtles as they came ashore to lay their eggs in the warm sands of the beaches. This, too, will become a program for the Life Science classes to teach the young people of Junior High School level the importance of the conservation of the wild life and the preservation of the habitats of our South Carolina species.—Willie M. Morrison

Cooking for the Birds

Mrs. T.B. Winstead, Box 365, Elm City, N.C. 27822, shares her bird "gook" recipe with our readers.

"I make a mix by 'drying out' beef suet, chopped into cubes, placed over medium heat in an iron Dutch oven. I crumble the 'cracklings' into stale rice, grits, uncooked oatmeal, 'fish grease' or most anything that comes to hand. This mixture I place in gourds and suspend from a tree branch which has a convenient one below for perching.

"I usually throw in some sunflower seed, wild bird seed mixture and peanut butter to tempt the more choice specimens. During the winter, Baltimore Orioles cannot resist thick slices of baked sweet potatoes stuck on a twig or branch."

Another recipe, given to me by Mrs. P.A. King, that I have used for years brings in the Baltimore Orioles, warblers, wrens, kinglets, woodpeckers, Catbirds, etc. To two cups of water and two cups of bacon grease brought to a boil, add two cups of quick cooking oatmeal. Let cook for five minutes. Stir in separately one cup of peanut butter and one can of horsemeat dogfood. Put in glass jars and store in cool place. When 15 to 25 orioles are feeding daily, I make a double amount and hope that it will last for a week.—WMM



Founded 6 March 1937

Incorporated 8 August 1949

Carolina Bird Club is an incorporated association for the study and conservation of wildlife, particularly birds, chiefly in the Carolinas. Founded in 1937 as the North Carolina Bird Club, it was joined in 1948 by several South Carolina natural history clubs and the name changed to the Carolina Bird Club.

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The Chat

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OUR COVER—A Turkey hen broods her chicks in a nest in Carteret County, N.C.
Photo by Jack Dermid, courtesy N.C. Wildlife Resources Commission.

RANGE EXPANSION OF THE CATTLE EGRET INTO INTERIOR SOUTH CAROLINA

WILLIAM POST

The Cattle Egret (*Bubulcus ibis*) has increased on the coast of North Carolina and South Carolina since 1961, but the first breeding of the Cattle Egret in the interior of the Carolinas was not reported until 1968, from Barnwell County, S.C. (W. Post, *vide* Parnell, 1968). The initial increase of the Cattle Egret in the interior was reflected in the sightings of spring flocks from Richmond County, Georgia, to Richland County, S.C. Overing (1966) saw 18 birds on 9 May 1966 in upper Richland County, S.C. T.M. Rial saw flocks of up to 20 in May 1967 and stated that the species had been increasing in Aiken County, S.C., since 1962 (T.M. Rial, *vide* Parnell, 1967a). At least since 1967, the Cattle Egret has become a regular summer resident in Aiken County. For example, on 18 June 1967 I saw 64 in a small area of Aiken County (W. Post, *vide* Parnell, 1967b).

While running a breeding bird survey route in June 1968, I saw large numbers of Cattle Egrets in central Aiken County, along the fall line, and decided to make an aerial survey. On 8 June Malcolm Lucas, a professional pilot, flew me out of the Aiken airport, heading southeast at 600 feet above sea level. We found flocks of Cattle Egrets around Aiken State Park, and then in the Salley area. We attempted to follow flying Cattle Egrets from about 700 feet, or about 500 feet above them, and they would change course and settle. Common Egrets (*Casmerodius albus*) were also difficult to follow by airplane.

We then flew along the South Edisto River southeastward, and about 4 miles S of Springfield, S.C., on the edge of the river swamp, we saw a concentration of white birds, mainly Cattle Egrets. We passed low over the heronry and the birds scattered from their nests. Not wanting to further disturb the colony, we flew back west, checking the Savannah River swamp down to the edge of the AEC area, before landing at Aiken. During the 2-hour flight we estimated seeing a total of 485 Cattle Egrets distributed as follows:

Aiken State Park area	105
Longleaf Plantation (near Salley)	70
Western Aiken County (near Savannah River)	50
Springfield area, outside heronry	80
Springfield heronry	180
TOTAL	485

Since these birds were seen at widely separated points and all within 45 minutes, duplication is unlikely. Most of the feeding Cattle Egrets were around the cattle on Longleaf Plantation and in the fields around Aiken State Park. Since we found no other heronries with Cattle Egrets, all the birds probably belonged to the Springfield heronry and were making feeding flights of 9 to 13 miles. Hopkins and Murton (1969) found Georgia Cattle Egrets making feeding flights up to 16 miles.

On 9 June, after a 3-hour search on ground, I was able to locate the heronry near Springfield. It was in a small pond formed by a dam across a creek near the edge of the South Edisto River swamp. The circular pond is about 4 acres, with water up to 4 feet deep. The pond has been heavily lumbered.

I found approximately 120 nests of Cattle Egrets and 14 nests of Little Blue Herons (*Florida caerulea*). The nests were located in an area about 150 by 200 feet, in the more open, bushy central area of the pond. The main trees in the center, and the ones used for nesting, in order of importance, were: black gum (*Nyssa sylvatica*), 7 to 20 feet high; button-bush (*Cephalanthus occidentalis*), 7 to 10 feet; and willow (*Salix* sp.), 7 to 12

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feet. The heavy growth of these trees afforded low nesting sites, and nests ranged from 4 to 6 feet above the water.

Other trees were bald cypress (*Taxodium distichum*), 6 or 7 specimens about 30 feet high; wax myrtle (*Myrica cerifera*); virginia willow (*Itea virginica*); fetter bush (*Lyonia lucida*); titi (*Cyrilla racemiflora*); sweet gum (*Liquidambar styraciflua*); red maple (*Acer rubrum*); sweet bay (*Magnolia virginiana*); blueberry (*Vaccinium* sp.). All these trees were found around the edges of the nesting area.

Most of the 23 Cattle Egret nests examined had incomplete clutches. The distribution was as follows:

CONTENTS	NO. OF NESTS
0 eggs	6
1 egg	4
2 eggs	5
3 eggs	7
4 eggs	1

In contrast, the Little Blue Herons' nesting was well advanced. In the three nests that were examined there were 3 almost fully grown young, 3 half-grown young, and 2 eggs.

On 21 July 1969 Frederick Post, William Hastings, and I visited the Springfield heronry. We estimated that there were 100 Cattle Egret nests. We also found a pair of Anhingas (*Anhinga anhinga*) with two large young in the nest, two pairs of Common Egrets with five chicks, and one pair of Little Blue Herons. We banded 62 young Cattle Egrets from about 25 nests. As in 1968, the Cattle Egret showed good nesting synchrony:

CONTENTS	NO. OF NESTS
3 eggs	2
1 young, 3 eggs	1
3 to 6 day old young	3
7 to 14 day old young	5
over 14 day old young	25

Cattle Egrets in the Springfield colony are tamer than the birds I have seen in coastal colonies, probably due to the isolation of the colony. There appear to be few predators other than several Fish Crows (*Corvus ossifragus*). Six large young were examined and found to be free of ectoparasites. The Little Blue Herons were seen to dominate the Cattle Egrets in that they displaced them from perches.

The Cattle Egrets nesting at Springfield represent a breeding range expansion of about 90 miles from the coast. An equivalent range expansion has taken place in Georgia. In 1967 Hopkins and Dopson found Cattle Egrets nesting as far inland as Pulaski County, about 130 miles from the coast (Hopkins and Dopson, 1968). Rial and Denton reported over 200 nests near Midville, Burke County, Georgia (T.M. Rial and J.F. Denton, *vide* Parnell, 1968). The Midville site is only 70 miles from Springfield.

I believe three factors may influence the further spread of the Cattle Egret in the interior: 1) continued changes in land use, 2) lack of competition, and 3) presence of suitable sites for nesting colonies. The number of cattle operations on the upper coastal plain and lower piedmont is increasing annually. In the interior there is little competition from other waders. In Aiken County I have observed Cattle Egrets feeding along the edge of ponds, a niche usually filled by the Snowy Egret (*Leucophoyx thula*). The Snowy Egret is largely absent from the interior, and Little Blue Herons are not common. The most important factor may be the presence of favorable colony sites. Davis (1960) suggested that the breeding range expansion of the Cattle Egret may depend on the availability of nesting sites with the proper type of vegetation, i.e. low, thick vegetation close to the water. The Springfield heronry site has this type of regenerating vegetation that should be found wherever timber has been harvested in wooded ponds or swamps. Hopkins and Murton (1969) found Cattle Egrets usually nesting close to the water. For

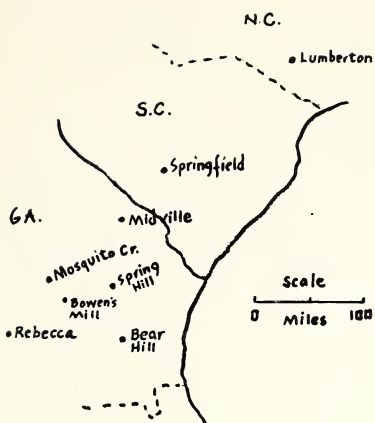


Figure 1. Inland nesting localities for the Cattle Egret in Georgia and South Carolina. Lumberton, N.C., is a predicted nesting site. Georgia localities are from Hopkins and Murton (1969) and Parnell (1968).

example, in the Rebecca, Georgia, rookery 1,800 nests averaged 5.5 feet above the water.

The many nesting colonies of Cattle Egrets on the upper coastal plain of Georgia and South Carolina (see Figure 1) suggest that this species is moving northward near the fall line. The number of birds involved in this expansion is probably as great as that nesting on the coast. Ornithologists in North Carolina should be on the lookout for interior colonies. The heronry at Lennon's Marsh near Lumberton, N.C., would be a likely breeding spot (Quay and Funderburg, 1958).

ACKNOWLEDGEMENTS

I wish to thank William Hasting and Frederick Post, who helped me band and photograph Cattle Egrets in 1969.

SUMMARY

The Cattle Egret has been a regular summer resident in the interior of South Carolina since 1967, and was found breeding in 1968. A colony is described. The nesting birds probably fly up to 13 miles to feed. If suitable colony sites are available, the Cattle Egret should continue to increase and spread northward along the fall line.

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DECLINE OF THE DOUBLE-CRESTED CORMORANT AS A BREEDING BIRD IN NORTH CAROLINA

GILBERT S. GRANT

The Florida subspecies (*Phalacrocorax auritus floridanus*) of the Double-crested Cormorant has declined steadily as a breeding bird in North Carolina since first discovered in 1898 by Pearson (1926). The AOU *Check-list* (1957, p. 36) gives the breeding range of this subspecies as "... Great Lake, Craven County, North Carolina, probably in South Carolina, and from Florida" It gives the southernmost Atlantic coast nesting record for *P.a. auritus* as Massachusetts. Palmer (1962) states that no nest or colonies are known from Georgia or South Carolina. Therefore, the North Carolina colonies are the only known nesting sites on the Atlantic seaboard between Massachusetts and Florida. Palmer (1962, p. 330) suggests that colonies outside the present main range are "probably relict of former more extensive regular range. Some colonies shown on map probably now defunct." The Craven County nesting sites at Great Lake and Lake Ellis seem to substantiate this statement.

GREAT LAKE

Pearson (1926) found 151 occupied cormorant nests on 25 May 1898 in the stunted cypress trees of Great Lake. In June 1904 Pearson (1905) found only 121 nests there. P.B. Philipp (1910) and Bowditch (1910) visited Great Lake in 1909 and found 123 occupied nests. H.H. Brimley (Pearson, Brimley, and Brimley, revised 1959) discovered 159 nests there in 1911. Great Lake was visited by Royal, Davis, and Pearson (Pearson et al., 1959) on 11 June 1939, and they counted 41 nests, with birds sitting on only 33 nests. According to *Birds of North Carolina* (Pearson et al., 1959), Borden and Gower found 35 nests there on 28 June 1948, but no nests were found at Great Lake in June 1956. Bob Simpson (Field Director of the N.C. Wildlife Federation), Ed Grushinski (District Ranger at Croatan National Forest), and I visited Great Lake on 28 July 1969. No cormorants were seen and no nests were found. Although 28 July was a late date to observe cormorants in nests, I believe recently used nests would have been visible from the boat using binoculars. Mr. and Mrs. Fred Conderman (pers. com.) said it had been fully 10 years since they last saw cormorants in Great Lake.

Great Lake has apparently changed in some way since Pearson and others visited it in the early 1900s. Philipp (1910) recorded Great Blue Herons (*Ardea herodias*), Little Blue Herons (*Florida caerulea*), Black-crowned Night Heron (*Nycticorax nycticorax*), and Ospreys (*Pandion haliaetus*) as breeders in 1909. He counted 30 Osprey nests and 16 Little Blue Heron nests. When Davis, Pearson, and Royal (Pearson et al., 1959) visited the lake on 11 June 1939, no colony of nesting Ospreys was found. I found only 3 Osprey nests in 1969, two of which were very old and not being used and a third which may have been used within the last year or two. Several Barn Swallows (*Hirundo rustica*) and one Common Tern (*Sterna hirundo*) were the only birds seen over Great Lake on 28 July 1969.

The water level was dropped about 2 feet at Great Lake during the summer of 1968 by the Forest Service (Ed Grushinski, pers. com.). This partial drainage exposed the shoreline about 100 yards farther toward the center of the lake than prior to 1968. However, this partial drainage occurred at least 12 years after the last cormorant was recorded nesting in Great Lake and thus had no effect on its breeding decline.

LAKE ELLIS

Nesting was recorded for the first time in Lake Ellis in 1953, and 9 nests were counted in June 1956 (Pearson et al., 1959). The Brimleys, Philipp, S.E. Simpson, Thompson, Holmes, and Joyner (Pearson et al., 1959) visited Lake Ellis between 1906

and 1953, and none recorded seeing cormorants there prior to 1953. When Mr. Haywood guided me into Lake Ellis on 5 July 1969, we saw two adult cormorants flying together low over the lake but found no nests. We searched the lake by boat and scanned the shore with 7x35 binoculars. Mr. and Mrs. Fred Conderman (pers. com.) said it has been 3 or 4 years since cormorants nested on the back side of Lake Ellis.

Lake Ellis today seems to have changed little since Philipp (1910) visited it in 1909. He found Pied-billed Grebes (*Podilymbus podiceps*), Wood Duck (*Aix sponsa*), Least Bittern (*Ixobrychus exilis*), King Rail (*Rallus elegans*), and Florida Gallinule (*Gallinula chloropus*) breeding there. On 5 July 1969 I found Least Bittern, Black Duck (*Anas rubripes*), and 17 Osprey nests (12 active) at Lake Ellis in addition to observing the two cormorants mentioned earlier in this paper. All kinds of wildlife are strictly protected here, making it unclear as to why the cormorants have ceased nesting at Lake Ellis.

DISCUSSION

The Fish Crow (*Corvus ossifragus*) may have contributed the most toward destroying the Great Lake and Lake Ellis colonies of Florida Cormorants. H.H. Brimley (Pearson et al., 1959) stated that every egg of 16 nests in a colony of Little Blue Herons was destroyed while he visited Great Lake on 15 June 1909. Pearson (Pearson et al., 1959) stated that two Fish Crows were seen to alight on cormorant nests and fly off with an egg each during their short visit on 11 June 1939. Perhaps an additional factor contributing to the decline is the distance the cormorants must travel to their food source in Bogue Sound, which is fully 10 miles from Great Lake and Lake Ellis. The initial nesting decrease cannot be attributed to pesticides because the decreasing trend was quite evident by 1939 and the adverse effect of DDT on eggshells began after 1945 according to Radcliffe (1967).

Florida Cormorants still roost during the summer in the coastal counties near Great Lake and Lake Ellis. I saw 6 immature cormorants near New River, Onslow County, on many occasions during the summer of 1969; and John Fussell (pers. com.) has observed cormorants in decreasing numbers in Bogue Sound, Carteret County, during the past several summers.

Note: An error was discovered in the Florida Cormorant plates in Bent (1964, Dover ed.). The caption under plate 47, showing Florida Cormorants on nests in trees, gives the location as Lake Ellis while the same picture appears in the *Auk* (1910, between p. 310 and 311) and the location given is Great Lake. Great Lake is the correct location since the first cormorant nesting record for Lake Ellis was in 1953, as stated earlier.

ACKNOWLEDGEMENTS

I am deeply indebted to Mr. Pugh for permission to enter Lake Ellis, to Mr. King for use of his boat, and to Mr. Haywood for guiding me into Lake Ellis. I also wish to thank Mr. Grushinski for his assistance in entering Great Lake. Special thanks go to Mr. Simpson for use of his boat and his assistance in entering both Great Lake and Lake Ellis.

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Route 1, Box 363, Sneads Ferry, N.C., 23 February 1970

East Coast Tern Watch

This summer volunteers from Nova Scotia to South Carolina will band young Common and Roseate Terns with a colored plastic band in addition to the US Fish and Wildlife Service band. The plastic band will be placed on the leg opposite the aluminum. Each province and state will use a different color so that observers can recognize birds from different areas.

Through observations of these color banded birds we hope to gain information regarding the following questions. How far do birds banded from different areas along the coast as well as inland range from their breeding colonies during their post breeding dispersal? Do birds from different areas along the coast concentrate at particular places in the fall? How late are these species seen at different points along the coast?

The following people will participate in color banding this summer, using the listed colors: Nova Scotia-I.A. McLaren-yellow; Maine-Libby, Hatch, Gobeil-red and white horizontal stripe; Massachusetts-Howard-orange; Connecticut-Procter-green and white horizontal stripe; Lake Erie, New York-Clarke-Light blue; Western Long Island, N.Y.-Heath, Gochfeld-royal blue; Eastern Long Island, N.Y.-Wilcox-black and white horizontal stripe; New Jersey-Savell-green; Maryland-Van Velzen-white; Virginia-Byrd-black; North Carolina-Davis, Fussell-green and brown horizontal stripe; Great Gull Island, N.Y.-Hays-color combinations using US Fish and Wildlife Service band and three color bands, two bands on each leg.

Please watch for color banded terns and send observations to the bander in your area or to: Miss Helen Hays

Great Gull Island Project
American Museum of Natural History
Central Park West at 79th St.
New York, N.Y. 10024

We would also like to compile a list of places along the coast where concentrations of Common and/or Roseate Terns can be seen in late summer and early fall. If you know of any such places send them to Miss H. Hays at the above address. Any information you can supply on color banded terns or concentration points along the coast would be of great help.

American Birding Association

CBC members, particularly those who make birding trips to other states, may be interested in joining the American Birding Association, P.O. Box 4335, Austin, Texas 78751. Founded less than two years ago, this club offers a lively magazine called *Birding*, sends members file sheets with tips for planning birding trips, and publishes annually the names of members having the longest lists for the A.O.U. area, world, or home states. In other words, ABA is devoted to promoting the recreational aspects of bird watching. One of its most useful projects is encouraging birders to keep accurate records of what was seen, when, and where. ABA makes the record keeping fun . . . a competitive sport!

FORSTER'S TERNS SUMMERING IN COASTAL NORTH CAROLINA

GILBERT S. GRANT and JOHN FUSSELL III

Forster's Terns (*Sterna forsteri*) have been found in North Carolina on but few occasions during the summer. Pearson, Brimley, and Brimley (*Birds of North Carolina*, 1959) give the summer dates as 8 July at Pea Island and 14 to 19 July in Henderson County and comment that a few may possibly breed in the state. However, no records of Forster's Terns observed throughout the summer in North Carolina have been published.

SUMMER OBSERVATIONS

Grant found Forster's Terns regularly during the summer of 1969 at Alligator Bay, near Sneads Ferry, Onslow County, N.C., and observed one at Queens Creek, near Swansboro in Onslow County. Fussell saw them at North River, near Beaufort in Carteret County, N.C.

A single immature Forster's Tern was observed in Alligator Bay by Meys Gardner and Grant on 5 June 1969. Five individuals were present on 14 June, one on 24 June, two on 28 June, three on 4 July, one on 12 July, two on 14 July, three on 26 July, one on 27 July, six on 3 August, 10 on 11 August, and 25 on 24 August, all in New River and Alligator Bay. On 5 July Grant saw an adult in breeding plumage at Queens Creek. Both immature birds and adults in breeding plumage were studied, and on one occasion (14 June) four immatures were flying with an adult. The August sight records probably include many migrants that came through the area in small flocks between early August and early September.

On 6 July Fussell observed six Forster's Terns at North River Marsh near the North River bridge. Three birds were adults and three were immatures. No Forster's Terns were found at North River on 14 July, but 12 were present on 19 July. This immediate area is suitable for Forster's Terns. There are no sand islands, and Common Terns (*Sterna hirundo*) are not frequently seen at North River Marsh. Fussell noted the distinctive call, the silver primaries, and the distinctive eye bands.

Common Terns, both adults in breeding plumage and immatures, were at the Sneads Ferry area and provided excellent comparison with the Forster's Terns. Soft part colors aid greatly in the identification of these two species of terns in full breeding plumage. Basal half of the bill is light orange and terminal half is black in Forster's Tern, whereas the Common Tern has a blood red bill with some black visible at the tip. Feet and legs of Forster's Tern are bright orange, while these of the Common Tern are bright red. Silver primaries of Forster's Tern contrast sharply at close range with the dark-tipped primaries of the Common Tern. Also, at close range the gray-white color pattern of the rectrices distinguishes the two species. The call is also diagnostic.

Three specimens were collected by Grant near Sneads Ferry and deposited in the United States National Museum. An adult male in full breeding plumage (USNM No. 532289) was taken on 28 June 1969. The left testis measured 7x4 mm and the right testis measured 6x3 mm, which are probably of breeding size. An immature male (USNM No. 532287) collected on 24 June 1969 and an immature female (USNM No. 532288) collected on 28 June 1969 both had unossified skulls. The crown, back, scapulars, wing coverts, upper breast, and the tips of the inner rectrices on the immature female were brown tinged suggesting a bird of the year. Roxie C. Laybourne confirmed the identification of these specimens at the United States National Museum.

DISCUSSION

The A.O.U. *Check-list* (1957, p. 234) gives the breeding range of Forster's Tern as "... southeastern Texas to southern Louisiana; southeastern Maryland (Chincoteague

Bay), and eastern Virginia (Cobbs, Smith islands); formerly in . . . South Carolina (Bulls Bay).” Robbins and Van Velzen (*The Breeding Bird Survey 1967 and 1968*, United States Fish and Wildlife Service Special Scientific Report-Wildlife No. 124, p. 95) show that Forster’s Terns were recorded on Breeding Bird Survey routes in Florida, Virginia, and Maryland in 1967 and in Florida, Georgia, and Maryland in 1968. It is quite probable that these birds breed in North Carolina. A thorough search during late June in the marshes and small, grassy islands in Alligator Bay and New River disclosed no nests. However, much suitable habitat exists near the gull and tern colonies of Ocracoke, Hatteras, and Oregon Inlets, in the Morehead City-Beaufort area, and in the lower Cape Fear River. Careful search by ornithologists familiar with the field marks of the Forster’s Tern should be made in the above areas in late May, June, and early July to determine to what extent, if any, this species breeds in North Carolina.

Route 1, Box 363, Sneads Ferry, N.C., and 1412 Shepard Street, Morehead City, N.C.
2 March 1970

BOOK REVIEWS

SOUTH CAROLINA BIRD LIFE (Revised Edition). Alexander Sprunt Jr. and E. Burnham Chamberlain, with supplement by E. Milby Burton. University of South Carolina Press, Columbia, 1970. 655 p., illus., index. \$18.50 (\$25.00 beginning 1 January 1971).

The revised edition of *South Carolina Bird Life* adds 25 species to the state list and also points out a surprisingly large number of changes in status. E. Milby Burton’s 69-page supplement to the 1949 edition is a valuable contribution to the ornithological literature. On the whole he has shown excellent judgment in his evaluation of data accumulated in the past 20 years. The only problem I have noticed can be attributed to a confusing change in the vernacular name of *Buteo jamaicensis kriderii*. On page 161 this pale subspecies of the Red-tailed Hawk (formerly Krider’s Hawk) is added to the state list because of a bird first seen in South Carolina but actually collected in Georgia, while on page 639 this same race is placed on the hypothetical list on the basis of recent sight records. If Dr. Murphey’s specimen has been discredited, there is no mention of it in the supplement. However, the status of *B.j. kriderii* is a small point that in no way impairs the usefulness of the new state bird book to those who are primarily concerned with bird study at the species level. *South Carolina Bird Life* is a handsomely produced and thoughtfully revised book of great interest to bird students throughout the southeastern United States.--EFP

FROM LAUREL HILL TO SILER’S BOG. John K. Terres, illustrated by Charles L. Ripper. Alfred A. Knopf, Inc., New York, 1969. 227 p. \$6.95.

Based on the author’s experiences afield while he was living at Chapel Hill, *From Laurel Hill to Siler’s Bog* gives the reader a rare opportunity to roam the North Carolina countryside with a naturalist of extraordinary keenness and charm. With him we discover the secrets of the muskrat pond, search for the old black gobbler, and wonder how the vulture finds its prey. Each chapter brings a new adventure, a new appreciation of animals we tend to take for granted. The book also includes a brief history of the Mason Farm and of the family that bequeathed the 800-acre plantation to the University of North Carolina. It should be on the shelves of every school and public library in North Carolina, though its appeal extends far beyond the boundaries of the state.--EFP



BIRD WATCHERS'

Roundtable

BIRDS OF THE BLUE RIDGE PARKWAY

LARRY BANCROFT

One of the most interesting areas for bird watching in North Carolina is the Blue Ridge Parkway. This elongated park of 469 miles follows the Appalachian crests from Shenandoah National Park in Virginia to Great Smoky Mountains National Park in North Carolina. The Parkway is primarily for the motor recreationist, but numerous trails are designed to offer scenic vistas that make ideal areas for bird observation.

As a Park Ranger for the last three years I have become familiar with many birds of the Gillespie Gap area of the Parkway. This section begins at Grandfather Mountain (Mile Post 305) on the north and extends southward to Mt. Mitchell (Mile Post 355). The changing elevation (2,700 feet to 5,300 feet) and varying climate account for a wide range of habitats—seven major forest types, open fields, rivers, and streams.

Come with me on an imaginary field trip in early June and discover some of the bird life in these mountains. Let us begin at the Beacon Heights Trail (Mile Post 305) at the base of majestic Grandfather Mountain. Can you feel the coolness of the northern environment? It supports a forest of northern hardwoods and some spruce. Thus, the birds that we will see here have northern affinities. Watch and listen for the Winter Wren, Veery, Golden-crowned Kinglet, Solitary Vireo, Black-throated Green, Black-throated Blue, Chestnut-sided, and Canada Warblers. Approaching Beacon Heights, a large open outcrop of quartzite, we may see Carolina Slate-colored Juncos flitting in the Sand Myrtle. This is also an excellent vantage point from which to observe fall hawk migration.

Let us return to the cars and travel south to Flat Rock Nature Trail. The self-guiding leaflet provided for you at the beginning of the trail will help to interpret this forest. Can you feel the difference in the temperature here as compared to Beacon Heights? The intermediate to dry environment is ideal for the Closed-Oak Forest (formerly Oak-Chestnut Forest). This habitat is ideally suited for many of our woodland species—Downy Woodpecker, Tufted Titmouse, White-breasted Nuthatch, Wood Thrush, and several warblers. The Flat Rock is similar to the outcrop at Beacon Heights, consisting of gray quartzite criss-crossed with “stringers” of white quartz. Listen for the “tip-churr” call of the Scarlet Tanager as we descend the trail.

Linville Falls Recreation Area is our next stop. Various habitats are found here including open fields, forest edge, river, Hemlock Forest, and Oak-Pine Forest. At this elevation (3,200 feet) we will see many of the middle elevation birds. First we will stop at River Bend parking area to look for the Louisiana Waterthrush, Parula, Yellow, Kentucky, and Hooded Warblers. The Belted Kingfisher has often been seen at the nearby river. Let us continue on to the parking area to the falls.

Linville Falls Recreation area is 440 acres and was acquired through the donation of John D. Rockefeller Jr. The Linville River pours over the falls and flows through the Linville Gorge Wilderness. There are two trail systems that lead to several views of the falls. We will take the trail that leads from the right of the parking area. As we walk along observe the unusually large White Pine and both Carolina and Canada Hemlocks. Sections of the trail pass through a climax Hemlock Forest. Some of the largest Carolina Hemlocks in the world are found here. This mature forest has several layers of vegetation each supporting all kinds of animal life. The layers are the canopy (top), understory, shrub, herb, and finally the forest floor. Several species of birds can be observed nesting in each of these layers.

Insects may attract Scarlet Tanagers and Cerulean Warblers in the canopy. The understory layer is composed of low-growing trees such as dogwoods and hornbeams which attract nesting Catbirds, Solitary, and Red-Eyed Vireos. The shrub layer in this forest is composed mostly of Rosebay Rhododendron with some Mountain Laurel and Catawba Rhododendron, favorite nesting sites for the Rose-breasted Grosbeak. Other species such as the ground-nesting Ovenbird and Ruffed Grouse build their nests beneath the shrubs. The herb layer is composed of green plants that have soft stems—flowers, ferns, mosses, and mushrooms. Kentucky Warblers are often found nesting here. The forest floor provides nesting sites for Rufous-sided Towhees and Brown Thrashers and also acts as a wastebasket for all the layers above. Erwin's View marks the destination of this trail with an excellent view of the falls. Linville Falls originated 12 miles downstream and over the past million years has gradually cut upstream to its present location.

The fields at the entrance to the Linville Falls spur road are ideal habitat for Eastern Kingbirds, Eastern Bluebirds, American Goldfinches, Brown-headed Cowbirds, Indigo Buntings, Chipping, Song, and Field Sparrows. How many of these did you see? Even unusual birds such as the Cattle Egret have been found here.

Our last stop will be at Crabtree Meadows Recreation Area, 23 miles south on the Parkway. The Carolina Rhododendron near Chestoa View and Bear Den Overlook should be in bloom. We should see several additional species—hawks, Yellow-shafted Flickers, Pileated Woodpeckers, and crows as we travel south. Pileated Woodpeckers can often be seen from Mile Post 318 to 320.

The Crabtree Meadows Recreation Area is 253 acres in size. There is a two-mile loop trail to Crabtree Falls through an Oak-Hickory Forest. In early May the Meadows and adjoining forests are ideal for spring wildflowers. Over 100 species bloom at this time of the year including Crested Iris, Pink and Yellow Lady Slippers, Showy Orchis, trilliums (many species), violets, and Fire Pink. May at Crabtree Meadows is also an excellent time for spring migrants. Some of the migrants that have been seen are Sora Rail, Blue Grosbeak, and Blackpoll Warbler.

As we walk to the falls you will see many species of birds we have already seen. The Black-billed and Yellow-billed Cuckoos, Least and Great Crested Flycatchers, and Brown Creepers have also been observed along the trail. Crabtree Falls marks the end of our field trip. Relax and enjoy the coolness and beauty found near the waterfalls before beginning the trail back.

I hope you will remember to include the Blue Ridge Parkway as one of your favorite birding areas. No promise is made that you will see all the aforementioned species on the various trails. However, what you do discover will more than likely surprise and delight you.

General Delivery, Linville Falls, N. C. 28647



Conservation

. . . with Marie Mellinger

The Summer Season

I had a conservation column planned and almost entirely written, on *Carolina in Crisis*, a title borrowed from a bulletin issued by the Citizen's Association of Beaufort County, South Carolina, during their fight against BASF. This was to be a weighty discussion of all the large issues confronting citizens of North and South Carolina including BASF, Crowder Shoals, Baldhead Island, and the Lake Norman Nuclear Plant. There has never been a time when the environmental crises have been as big an issue as they are in all the newspapers and magazines and over radio and television. One would have to be an ostrich not to see at least one of the headlines that demand our attention.

But it is summer, and hours spent out of doors at many of our parks and recreation areas, and rambling along the Chatooga River, led to a more personal type of thinking. We can all easily wax eloquent about environmental issues, and tend to ignore our need for personal involvement in fundamentals, the need to do rather than to talk, to set an example in at least a minor way. We deplore the individual who throws a drink can out of a car window, or leaves his picnic litter in the middle of some mossy dell.

"Of course," we say, with a certain amount of smug pride, "we never would do such a thing!" But how often do we exert ourselves to do the little bit extra, the picking up of the discarded can or litter? Do we leave the roadside or the beach or the stream or the picnic area cleaner than it was when we arrived?

Those hikers who use the Appalachian Trail should appreciate the privilege and be good trail keepers, yet we found litter and pieces of Catawba rhododendron, carelessly picked and discarded along the trail. Here again, let us hope the next hiker picks up the debris leaving the trail as clean and as undefiled as it should be.

Are we really good citizens, who will do the little bit extra needed to make this a better environment? Granted it is no fun to pick up after some one else, yet we can hope that our example may be followed. The National Forest Service is asking us to be such

concerned citizens. In four Chattahoochee Forest recreation areas, they are asking every visitor to clean the area as well as use it. Called the "Clean Up Honor System" this experiment will be tried until 1 July.

Pickens and Oconee Counties, South Carolina, have each hired a special deputy to crack down on litterbugs. If each of us would clean up one small area, such policing might not be necessary.

Quotable Quotes

"I give my pledge as an American to save and faithfully defend from waste the natural resources of my country, its soil and minerals, its forests, waters, and wildlife."—Conservation Pledge

"It would be worth it if in each town there would be a committee appointed to see that the beauty of the town received no detriment."—Henry David Thoreau

"Man has it in his power to remedy enough of the damage that he has caused to permit the survival of his civilization. The question is will he do it in time?"—Fairfield Osborn

"If you litter with disgrace,
And spoil the beauty of this place,
May indigestion rack your chest,
And ants invade your pants and vest."
from a sign at the entrance to the Pleasure Gardens of Ceylon

Hawks and owls are protected by law in North Carolina, yet a certain citizen of Franklin celebrated Easter morning by shooting and killing a handsome Red-shouldered Hawk that responded to his crow call.

"The earth is ours and the fullness there of." The land and all its creatures are in our stewardship. How did this individual accept his responsibility?

New and Timely

Our own CBC member, William C. Grimm, has almost done the impossible, combined trees, shrubs, and wild flowers in one readable volume highlighted with his most excellent drawings. He has grouped look-alikes in habitat situations, certainly a new approach. Those who browse through a book looking for a picture to match a recently seen plant specimen will be delighted with this *Home Guide to Trees, Shrubs, and Wild Flowers*, describing some 650 species, including many plants of the Coastal Plain. Available from Stackpole Books (\$9.95), Cameron and Keller Sts., Harrisburg, Pa. 17105.

Carolina Birds and Birders

. . . with Willie Morrison

The Petiole Munchers

Note from T.A. Beckett III, Magnolia Gardens and Nurseries, Route 4, Charleston, S.C. 29407, 12 March 1970:

"Just a quick note of an observation on the evening grosbeaks that I have not seen in print.

"On two different occasions I have had a number of grosbeaks that would obtain their fill of sunflower seed at my feeders and then, for some reason, fly into adjacent cherry laurel (*Prunus caroliniana*) and consume leaf petioles and twigs.

"I had noticed that the laurels were getting rather thin but did not suspect the cause until I was watching them after lunch and observing their activities.

"The birds would cut the petiole of a leaf off close to a twig and with a chewing motion work the petiole crosswise in the bill until it reached the leaf which was cut off and dropped. The same action was observed to take place with the small twigs, about toothpick size. The birds would cut them off and start one end into the bill, crosswise, but nothing would show up on the other side in spite of the fact that the twig might be 3 to 5 inches long.

"In spite of close observation, I have seen this occur only twice. In general, the majority of birds in a flock would participate in the action. When I examined the ground under the cherry laurels, I found that it would be covered with leaves without petioles."

Comment from WMM: When we received this note from Ted, Archie and I spent days watching the grosbeaks in the large cherry laurel about 10 feet from the feeders and 20 feet from the window. This is the favorite perching tree that they fly to when disturbed at the feeders.

Under the tree the ground was covered with brown and green leaves with no petioles, while many of the lower branches had no old leaves remaining, only the new terminal leaves, with the tight flowerbud clusters below.

For 15 minutes, Sunday morning, 15 March 1970, I watched a male grosbeak as he worked outward over three small branches, cutting the leaves from the stem, chewing the petiole and dropping the leaf. Sometimes he would leave two or three as he kept his balance and stretched to reach the tiny leaves of the terminal bud and the tight buds of the flower clusters below. During this short time of observing one bird, I counted 17 leaves fluttering downward. Reminds me of damage done by caterpillars to azaleas. If Ted hadn't told us about this I might be out looking for caterpillars!! In March???

I asked Ted to please answer one question for me. Where do the evening grosbeaks go when they leave the sunflower feeders after two to three o'clock? His answer is as follows:

"At my feeders here at Magnolia Gardens and Nurseries the grosbeaks come in great numbers early in the morning. A few birds continue feeding until about noon. At this time I again receive a large feeding flock and a few continue up to about three-thirty. Very few, if any, feed regularly at the feeders after this time in the afternoon.

"Where ever there are trees throughout the Nurseries, they can be heard but seldom seen. I have flushed them from the ground feeding on chickweed.

"Since 1958, when present, the species appears to spend considerable time in a wet gum, black and sweet gum area, bordering our sales yard. I know for sure that it was used for roosting at night before the undergrowth was cleared.

"During the past several weeks a large number of birds appear to loaf and feed on buds in some small live oaks adjacent to Magnolia Gardens at 'Ravenswood.' I consider their call note more important in locating them than sight. For instance, they often feed in willows though I seldom see them there."

Winter Finches at Mullins

Edward C. Bethea of 530 Yarboro St., Mullins, S.C., writes an interesting letter of his birdwatching activities in Mullins. He and his wife have been interested in birds for about 30 years. They have lived in Florida, North Carolina, and Maryland and have now moved back to South Carolina where the birding is the best that they have ever experienced. He recommends it very highly as a good hobby and therapy which gives genuine pleasure for the retired or shut-ins.

His letter of 4 February 1970 is typical of the reports coming to "The Chat" of the influx of Evening Grosbeaks, Purple Finches, Pine Siskins and a few reports of Red Crossbills.

"We moved back to Mullins after retiring in Miami, Florida. We bought a home and moved into it in June 1968. Being the bird-lovers that we are, about the first thing we did was to get a bird bath and install feeders. We now have so many birds that sometimes over the back yard is a blanket of birds. There are many different kinds and we welcome them all. We are now buying all our seed in bulk, getting 100 pounds of sunflower seed and 100 pounds of scratch feed at one time, which only lasts us for two weeks, in addition to stale bread, left over rice, grits and oatmeal.

"During the winter of 1968-69 we saw the first Evening Grosbeaks. On 23 November 1968 we saw one female. By 6 December 1968 they were coming in droves and staying. About 60 of them became regulars, leaving by 4 May 1969.

"This winter we saw 6 of them arrive 18 December 1969. By 1 January 1970 the flocks had built up so much they they were coming in droves to the backyard to feed. We have counted over 100 at one time.

"During the winter of 1968-69 we had as many as two male Red Crossbills every day for about a week. We saw the first of them this winter on 1 January 1970 and later 3 males with one female. One male has remained with us for a month now, eating sunflower seed right along with the Evening Grosbeaks."

Razorbill on Edisto Beach

Roger D. Lambert, Editor of *The Lesser Squawk*, 205 Harter Drive, Summerville, S.C. 29483, reports in the February 1970 issue, Vol. XXI No. 2, that on 17 February 1970 he found an oil-soaked Razorbill on Edisto Beach. A strong onshore wind which had prevailed for some time apparently had washed it ashore. Despite efforts to save it, this northern counterpart of the penguin died within a few hours.

Peregrine Falcon in Richland County

A note from William Bunch, 5040 Radcliffe Road, Columbia, S.C. 29206, reports that on 11 November 1969 he and George C. Taylor, 6230 Westshore Road, Columbia, S.C., sighted a Peregrine Falcon. "This took place on a farm 12 miles out of the city where there is approximately 1200 acres of big fields with a few small wooded areas and swamps surrounding this land. This is in Richland County and I have heard that these falcons are very uncommon in our area."

[*South Carolina Bird Life*, page 179, gives its status as rare summer resident in the mountains, uncommon winter visitor 14 August to 9 May, and in the remaining sections, most frequent along the coast where the Duck Hawk shows preference for the barrier islands and salt marshes.-WMM]

Hampton Bird Notes

Adding color to the dead-of-winter scene in our part of the Lowcountry were many more Baltimore Orioles than usual, staying over from fall to spring. One neighbor-friend reported in January, 10 pairs of them sighted at once at her patio feeders! Also here in great numbers from early winter until early March were American Goldfinches and Purple Finches.

There were fewer Robins than usual in the Hampton area, and fewer Evening Grosbeaks than last year. Only a couple of large flights of migrating Cedar Waxwings were sighted in town this year, also a decrease over previous years.

Many flickers headquarter in our yard, mostly, I suspect, because of a 75-foot sycamore tree back of our house. (They have often raised families in holes in the trunk high up in this tree). One day last November I watched a ceremonial dance between two flickers who had been scratching about in the pine mulch of an azalea bed. They were digging and picking for food when suddenly they faced each other, pranced back and forth in a ritualistic sort of dance-step, reminiscent of some of the routines on the modern dance floor. They were gyrating mostly from the neck up, stretching and moving back and forth in duck-fashion, while the rest of the body was held stiff. It was odd to watch!-MARTHA BEE ANDERSON, Hampton, S.C.

White Pelicans in Charleston Area

The Lesser Squawk reported in the November 1969 issue that James M. Dorn Jr., on 22 October 1969, saw four White Pelicans on North Edisto Sound. Although no other observer was present, he is quite certain of their identity. He writes: "These birds are much larger than the brown pelicans (saw them together) and their entire body is white-black on the wings when in flight. The beak pouch is huge and yellow. They feed right in the water by scouping, not diving as do the Brown Pelicans. I watched these birds for about an hour because I had never seen them before. I took some pictures which I hope will turn out."

The News and Courier, Sunday 30 November 1969 has a write-up by their Outdoors Writer, Farley Smith, telling of a White Pelican that has been staying on a fresh water pond on Julian Sidi Limehouse III of Mullet Hall Plantation on John's Island for several weeks. It doesn't seem to be bothered by visitors. If approached too closely it will fly to the Kiawah River but return within a few minutes.

Bluebird Trail at Pleasant Garden

A letter from Mrs. Harold Marriott Draper Jr., tells an interesting story of how they have increased the Eastern Bluebird population on their farm at Pleasant Garden, N.C.

"We moved from Greensboro to our farm in Pleasant Garden in September 1968 where we have a wonderful assortment of birds to enjoy and study. We counted over 53 species last year during spring and summer, (including our winter visitors still around in the spring, such as the White-throated Sparrow), and there are probably many that we missed in our wooded areas. We are starting a new tabulation with January of this year.

"You might like to know of our Bluebird Trail and its status. We started out with 8 boxes early in 1967. Each year we have added to these until we now have 20 boxes placed around our approximate 130 acre farm.

"Each year we are noting an increase in number of young hatched and raised-a real thrill. The most young are counted during the first nesting, or April-May in our area. In 1967 bluebirds were increased by 22 babies, in 1968 23 birds were hatched, and in 1969 there were 35 offspring.

"In 1969 bluebirds built and raised young twice in martin gourds suspended 15 feet in the air. We feel quite fortunate having bluebirds in our yard year-round, even in the coldest weather. With our population increase, we are urging everyone around us to erect

boxes as we will very soon have many prospective parents looking for suitable nesting sites, as they will only use a few of our boxes.

"One interesting nest combination was observed in a walnut tree below our house. A Wood Thrush built high in the tree and directly above this nest a Summer Tanager built its nest. So we watched both sets of parents feed babies at the same time and then take them off the nest the same afternoon."

Welcome, Wanderer

A little brown bird with red markings
Came to my house one day.
He came with a big flight of finches,
But he hadn't their 'I know this place' way.

He was rather shy and retiring
And flew at the slightest alarm,
While his much more colorful cousins
Sat placidly; fearing no harm.

Having known that in both Carolinas
For some winters past he'd been seen,
As each spring progressed, and the purples flew North,
He was something that just 'might have been'.

So; during those years I had sought him,
Having watched quite diligently,
When on that chilly day he at last came my way,
A fond dream became reality!

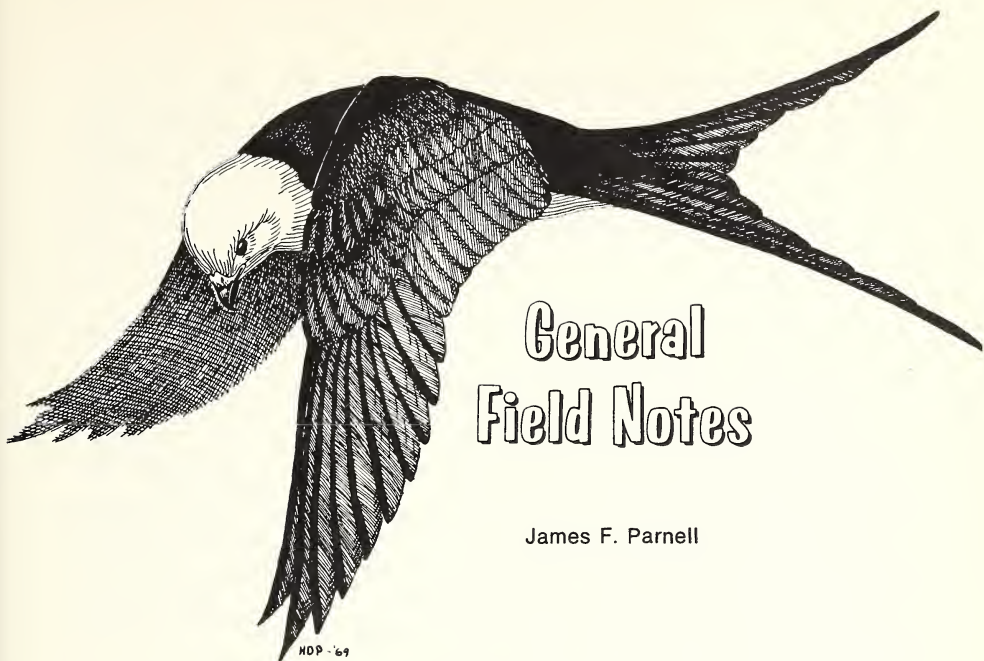
What a charming surprise, that first visit;
Tho I saw him daily since then,
How I watched with a wish that was fin'ly fulfilled
When he came with a little brown hen!

And once in a while there were more than the pair,
On one snowy day there were six!
Four wearing red, the other two plain,
Bet you know how that memory sticks!

In a short while they'd lost all their shyness
Seemed to fit right into the plan,
These few little strangers who cracked sunflower seed.
House Finches had come to Rowan.

One morning in late March I missed them,
Now; while I've not seen them since then
I hope; having fed at my feeders,
Next season they'll visit again.

H. MACK OWENS
P.O. Box 666
Salisbury, N.C. 28144



General Field Notes

James F. Parnell

Adjustment Problems of the Cattle Egret

JAMES O. PULLMAN

Route 2, Box 68, Chapel Hill, N.C. 27514

Received 20 September 1969

The rapidly spreading Cattle Egret seems to accept our domestic farm animals quite readily. Some recent observations at my rural home near Chapel Hill, N.C., suggest that the cattle may not adjust so easily. The house is situated at the edge of a pine woods, adjacent to a small farm pond, with pastures beyond. The latter are inhabited by about 20 black angus cattle. Since Cattle Egrets are not yet common in this area, my regular spring sightings suggest this may be a good resting ground for the species.

The first sighting of the Cattle Egret in the Chapel Hill area was Matt Thompson's on 12 April 1962. The second record of which I am aware is mine of 16 April 1966.

It was my second home sighting of the Cattle Egret that suggested the title of this note. On 13 May 1967 one was seen approaching over the pastures. The cattle appeared greatly agitated as the bird flew overhead and, when it settled nearby, one of the cows ran straight toward it until it was forced to take flight. It alighted again, was threatened a second time, flew to a vantage point several hundred feet distant, surveyed the situation, and then flew away to the northeast. It was not clear whether or not the cattle had intentionally driven the bird away.

Another Cattle Egret visited the farm on 10 May 1968. A calf, rather nonchalantly, approached the bird, which flew over a rise, out of sight. On 26 May I heard a disturbance from the pastures and found the cattle galloping in agitated fashion and an unidentified white heron flying away.

All this was brought into focus by an episode that occurred about a month later. One evening, a farm dog ran across the pasture with a white laying hen in his mouth. About halfway across the hen managed to escape, but was either flightless or injured. She ran easily, however, and fled toward the chicken houses along a route near the cattle. The latter acted much as they had with the Cattle Egrets, but now they were clearly attacking the hen. After surviving several charges, she was finally struck down, and, as

darkness fell, I could see only an occasional fluttering wing emerge from a mass of white feathers, in the middle of a circle of 10 or so cattle.

My subjective impression was that the cattle were badly frightened, but belligerent; and it also seemed likely that a Cattle Egret, slow to fly, would have suffered a similar fate.

Golden Eagle Specimen from Buncombe County, N.C.

GILBERT S. GRANT

Zoology Department

North Carolina State University, Raleigh, N.C.

Received 15 February 1970

A Golden Eagle (*Aquila chrysaetos*) was found dead on 23 January 1969 by John C. Young and sent to North Carolina State University to be prepared as a study skin. It was found in the NW corner of Buncombe County near Sandymush Bald, about 10.25 air miles W-NW of Leicester, N.C., at an altitude of about 5,000 feet. It proved to be an immature female with ova 2x2 mm in diameter and had a light accumulation of body fat. Several Mallophaga and one Hippoboscids fly were the only external parasites found. The scapulars and the back were molting heavily; and the breast, abdomen, head, and neck were molting lightly. All of the rectrices were old feathers except No. 1 left and No. 1 right which were about one-third developed. The primaries were also undergoing molt. On the right wing, primaries No. 1, 2, and 3 were new feathers; No. 4 was three-quarters developed; and the remaining ones were old. On the left wing, primaries No. 1 and 4 were broken off at the base (apparently shot), No. 2 and 3 were new feathers, and the remaining ones were old.

The specimen was prepared into a study skin and deposited in the North Carolina State Museum collection as NCSM No. 3937.

[Observations of Golden Eagles in North Carolina are unusual. Most records are probably of immature birds, such as the above, which have wandered east of their usual range.—DEPT. ED.]

Nesting of the Bald Eagle in the Charleston, S.C., Region

THEODORE A. BECKETT III

Magnolia Gardens and Nurseries

Route 4, Charleston, S.C.

Received 1 March 1970

During the winter of 1968 and the spring of 1969 S.C. Langston and I made an intensive effort to locate nests of the Bald Eagle (*Haliaeetus leucocephalus*) in the area between Georgetown and Beaufort. Most efforts were centered around Murphy's Island and the French Quarter Creek area of the upper Cooper River.

Many abandoned nests were found, some of which were being used by Great Horned Owls (*Bubo virginianus*). Six active nests were located. In addition one known young and possibly two were fledged on Cat Island according to Mr. Wilkinson, manager of South Island Plantation. At Bulls Island on the Cape Romain National Wildlife Refuge, Bald Eagles returned but failed to nest for the first time in many years.

It is believed that on Middleburg Plantation eggs were incubated in the nest, but for the first time in 35 years no young were produced. Four other nests in the French Quarter Creek area also failed to produce.

A new nest on the Wedge Plantation owned by Dr. Dominick was watched closely. Long after the eggs should have hatched they were examined and found to be infertile.

An interesting and new source of food was used by three immature Bald Eagles in the Muddy Bay area near Cat Island. For several years the colony of White Ibis (*Eudocimus albus*) on Pumpkinseed Island in this bay has been banded extensively. During the 1967 season three posts supporting no-trespassing signs were erected to discourage needless molestation of the colony.

On 18 May 1969 a Bald Eagle was found perched on each of the three posts in the edge of the White Ibis colony. Two of the eagles appeared to be of the current season's hatch and one from the 1968 season. When we began to check the ibis colony it was quite evident that a tremendous amount of egg breakage had taken place close to the areas where the eagles were securing the young for food. A rough estimate showed that nearly 1,500 nests were abandoned. The eagles continued to feed in the colony for several more days and were still present on 21 May. It may surprise some to learn that instead of reducing the number of White Ibis that fledged, a significant increase in nesting success was found by the end of the season.

Late Summer Record of a Saw-whet Owl

DOUGLAS PRATT

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Received 26 December 1969

While observing the sunset from Barnett Knob Fire Tower on the Swain-Jackson county line in the Cherokee Indian Reservation in North Carolina on 14 August 1969, I heard the unmistakable call notes of the Saw-whet Owl (*Aegolius acadicus*). The time was approximately 8:15 PM EDT. The bird gave its call twice with an interval of about 8 minutes between the calls. Mike Browne and Darryl Moffet were also present.

The area surrounding the summit of Barnett Knob is second-growth deciduous forest. Spruce is not present save for three small trees at the base of the tower. These appear to have been planted. This observation thus constitutes a late-season calling record for North Carolina as well as a record from outside of the normal habitat of the Saw-whet Owl. The elevation of Barnett Knob is approximately 4,500 feet. The bird was not heard on subsequent visits.

Leconte's Sparrow at Franklin, N.C.

MARY ENLOE

Route 1, Box 193, Franklin, N.C. 28734

Throughout the summer of 1968 I noticed small webs on the undersides of the leaves on the lower limbs of my sycamore tree. As the leaves fell they became attractive to several species of birds, including an Ovenbird, Carolina Wren, Tufted Titmice, Chipping, Field and Song sparrows, and Rufous-sided Towhees. Because of the activity among the leaves, I periodically checked the birds working on them.

About 5 PM on 17 October I thought I detected a movement in the fallen leaves about 5 yards from where I stood. I picked up binoculars and focused for close viewing. The bird worked so furtively that it was difficult to pick it up. I noted the dingy orange stripe above the eye, extending from bill to the nape of neck, and that the face and neck were suffused with the same shade of dull orange. When it faced me I noted the light streak down the center of the head and that its breast and under parts were unstreaked. It definitely was not a native bird and I delayed getting out my guide until I had seen every detail. When it turned I noted the sparse, and short, sharp tail, then reached for Peterson's guide. With close study it appeared to be a Leconte's Sparrow, so I checked it again and found the narrow stripes under the wing, and the narrow paler streaks around the nape of the neck, which contrasted sharply with the dark heavy stripes on its brown and buff back. In sunlight the streaks on the nape of its neck might have looked pink, but the sky was overcast and they appeared to be only a paler brown than the rest of its streaked plumage.

A Chipping Sparrow was feeding near it, and the Leconte's Sparrow seemed even smaller in comparison. A Carolina Wren was feeding about 6 feet beyond it and in comparison seemed larger. Its movements were barely perceptible, and it took so long for it to work its way across the driveway that I had a good, close view of it from every angle.

It had obviously followed a thicket of raspberry vines from the dense growth along the creek to the shrubbery near the walk. After it slowly and cautiously worked its way through the fallen leaves across the walk and driveway, it flew into the tangle of briars and weeds on the high bank back of the house and was lost from sight. I tried to find it in this growth but was unsuccessful.

[This appears to represent the third observation of this species in North Carolina and the only record outside of Wake County. See the article by Jones (*Chat*, 30:30) for the account of the Wake County records.--DEPT. ED.]

Briefs for the Files

Compiled by JAMES F. PARNELL

- Common Loon, one was found at Lake Benson near Raleigh, N.C., between 6 and 27 December 1969 by Robert Hader.
- Red-throated Loon, one was at Lake Wheeler near Raleigh on 11 November and 6 December 1969, Robert Hader.
- Red-necked Grebe, individuals were observed at Topsail Island, N.C., on 13 and 24 January 1970 by Gilbert Grant.
- Horned Grebe, J. Merrill Lynch noted an interesting build up of grebes during late winter on Roanoke Rapids Lake north of Roanoke Rapids, N.C. During December, January, and February numbers remained generally low. In late February numbers increased and were generally high throughout March. As many as 35 birds were observed on several occasions in late March. This appears to represent a build up preparatory to northward migration.
- Common Egret, an individual seen on 4 January 1970 at Raleigh was most unusual for the winter season, Harry and Edmund LeGrand.
- Cattle Egret, one was late at Springfield in Barnwell County, S.C., on 16 December 1969 by Bill Albritton and reported by Will Post.
- Glossy Ibis, six were seen inland flying over Tarboro, N.C., on 19 March 1970 by Mr. and Mrs. Ed Marrow.
- Peregrine Falcon, one was seen on 24 January 1970 at Topsail Island by Gilbert Grant.
- Pigeon Hawk, inland an individual was seen at Mason Farm near Chapel Hill, N.C., on 11 January 1970 by Robert Teulings. One was also seen near Columbia, S.C., on 18 January 1970 by Bruce Mack.
- Spotted Sandpiper, two wintered at Whispering Pines, N.C. They were recorded on 22 and 24 December 1969 and 30 January 1970 by Jay Carter.
- American Avocet, a flock of approximately 100 birds seen on 29 March 1970 just south of the Roanoke Island causeway by Mr. and Mrs. Frank B. Aycock Jr. indicates that the "outer bank" population may move some distance from the usual observation sites at Bodie and Pea Islands. Three avocets were also seen on 11 January 1970 at Hilton Head, S.C., by Mr. and Mrs. Stuart Rousler and reported by Caroline Newhall.
- House Wren, one seen on 10 January 1970 at Umstead State Park just west of Raleigh appears to be the first published January record for Wake County. The bird was also seen as late as 28 February, Harry and Edmund LeGrand.
- Catbird, one apparently wintered at a lake near Vass, N.C. It was seen as late as 15 February 1970, Jay Carter.
- Blue-gray Gnatcatcher, one was late at Raleigh on 23 November 1969, Harry and Edmund LeGrand; as was a single bird about 40 miles SE of Columbia, S.C., in the Santee River swamps on 27 December 1969, John Cely.
- Solitary Vireo, one seen at Umstead State Park near Raleigh on 3 January 1970 was unusual at this season, Harry LeGrand.
- American Redstart, a female was seen building a nest in the Santee River swamp about 40 miles SE of Columbia, S.C., on 14 May 1966 by John Cely. This is one of very few records of this species nesting in the coastal plain of the Carolinas.

Whistling Swan, there were several inland sightings this winter. A flock of 8 remained on a lake near Fuquay, N.C., from late November 1969 to 16 March 1970, Donna Goodwin. At Raleigh two remained on Lake Benson from late November 1969 to 7 March 1970, Robert Hader. Two immatures were at Whispering Pines, N.C., on 25 and 27 January 1970, and a third bird was there on 7 February 1970, Jay Carter. Two birds were also on Eastwood Lake at Chapel Hill, N.C., on 15 February, John P. Filley.

European Widgeon, a male was studied carefully in a good light for about 10 minutes in a flock of about 250 American Widgeon on 1 February 1970 in New River at Sneads Ferry, N.C., by Gilbert Grant.

Canvasback, this duck was much more common along the North Carolina coast than usual this winter. An estimated 7,000 to 10,000 were seen near Aurora, N.C., on 10 January 1970, James F. Parnell. At Wilmington, N.C., flocks of 100 to 200 were regularly seen on the Cape Fear River, James F. Parnell. Inland a flock of 35 was found near Raleigh on 21 March 1970 by Robert Hader.

Greater Scaup, up to 12 were found regularly throughout the winter at Lake Raleigh near Raleigh by Robert Hader. They were also more common than usual at Wilmington, James F. Parnell.

Common Merganser, one was seen inland near Raleigh on 17 January 1970, and two were there between 1 and 21 February 1970, Robert Hader, Harry and Edmund LeGrand. A single female was seen on Thaggard's Lake near Southern Pines on 22 and 23 December by Jay Carter.

Rough-legged Hawk, one was studied carefully on 24 January 1970 at the north end of Topsail Island, N.C., by Gilbert Grant.

Yellowthroat, a banded male was present at Mason Farm near Chapel Hill on 7 December 1969 and 17 January 1970, J. O. Pullman. A male was also found at Southern Pines on 22 December 1969 by Jay Carter, and one was seen at Raleigh on 22 November 1969 by Robert Hader. Such winter records are unusual inland.

Dickcissel, one was seen in a yard in Whitakers, N.C., on 20 March 1970 by Mrs. H.M. Browder Jr. One was also at a feeder in Campobello, S.C., on 17 December 1969, Mrs. Walter Gibson and reported by Mrs. Carol Grenell; and one was at Southern Pines on 4 March, Jay Carter.

Common Redpoll, a single bird was seen at the feeder of Robert Ruiz at Swannanoa, N.C., on 3 February 1970. One was also present at Hertford, N.C., during January 1970, David Cox Jr.

White-crowned Sparrow, a single bird at Greensboro, N.C., between 1 and 5 May 1970 represents a late spring record, Kathryn Lambeth.

Snow Buntings, a flock of 25 was seen near Beaufort, N. C., on 13 December 1969 by Harry LeGrand, Thomas L. Quay, and others.

CORRECTION: In the December 1969 *Chat* the Upland Plover records from Southern Pines are given incorrectly. The item should state that 2 were seen on 24 March and 1 on 26 April.-JFP

New AFN Regional Editor

Robert P. Teulings, immediate past president of CBC, is the new Southern Atlantic Coast regional editor for *Audubon Field Notes*. He will also compile the Briefs for the Files section of *Chat*. Dr. Teulings' address is Route 2, Chapel Hill, N.C. 27514. As regional editor he succeeds James F. Parnell, who was recently named chairman of the Department of Biology at the University of North Carolina at Wilmington. Dr. Parnell will continue to edit the General Field Notes for *Chat*.



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Incorporated 8 August 1949

Carolina Bird Club is an incorporated association for the study and conservation of wildlife, particularly birds, chiefly in the Carolinas. Founded in 1937 as the North Carolina Bird Club, it was joined in 1948 by several South Carolina natural history clubs and the name changed to the Carolina Bird Club.

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THE CHAT

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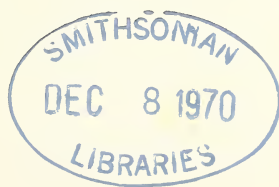
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OUR COVER—John Henry Dick contributed the Barn Owl on the front cover and also the Black-necked Stilt on page 83. The Common Redpoll on page 53 is the work of Carol Rudy, a Wisconsin bird bander whose drawings frequently appear in EBBA News, journal of the Eastern Bird Banding Association, and in The Passenger Pigeon.



WINTER FINCH INFLUX 1969-1970

ROBERT P. TEULINGS

"And thick and fast they came at last,
and more, and more, AND MORE."

-Lewis Carroll, *Alice in Wonderland*

They came by the thousands and consumed sunflower seed by the ton. Evening Grosbeaks, Pine Siskins, and Purple Finches poured into the Carolinas again last winter, staging an impressive encore to their 1968-1969 invasion. With them came an unprecedented number of Red Crossbills and House Finches. There were reports also of White-winged Crossbills, Common Redpolls, and Pine Grosbeaks.

Christmas count statistics in Table 1 indicate that Purple Finches and Pine Siskins were even more numerous this year than last. The Evening Grosbeak invasion, too, was exceptionally strong, rivaling last year's record-breaking flight.

TABLE 1. Christmas count totals for Evening Grosbeaks, Purple Finches, and Pine Siskins for peak years in the Carolinas since 1961.

	<u>1961</u>	<u>1963</u>	<u>1965</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>
Observers/Parties	283/108	286/100	400/131	435/159	398/151	452/130
Evening Grosbeaks	134	284	840	12	1946	1672
Purple Finches	410	863	1889	1309	1551	2160
Pine Siskins	118	3348	5766	87	1869	3513

The earliest sightings of northern finches were recorded in the latter half of October. The vanguard was rather light and confined mainly to the upper piedmont section of North Carolina. Signs of a massive invasion did not become generally apparent until December when the winter finches began spreading along the coast and down into South Carolina. Many observers throughout the region took careful note of the Evening

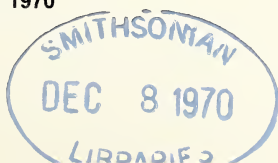


TABLE 2. *Peak flock sizes and arrival departure dates of Evening Grosbeaks at various locations in the Carolinas during the 1969 - 1970 season.*

Place	First Date - Last Date	Peak Flock Size	Observers
Coast and Coastal Plain			
Morehead City, N.C.	21 Dec. - 7 May	100	Fussell, Lincoln
New Bern, N.C.	15 Dec. - 25 April	25 - 30	Card, Leland
Charleston, S.C.		75	Beckett
Mullins, S.C.	18 Dec. - 2 May	120	Bethea
Piedmont			
Henderson, N.C.		200	Harris
Chapel Hill, N.C.	12 Nov. - 8 May	150	Geist, Teulings
Greensboro, N.C.	27 Dec. - 24 April	10	Schiffman
Winston-Salem, N.C.	22 Nov. - 11 May		Snavelly
Raleigh, N.C.	31 Oct. - 9 May		LeGrand
Southern Pines, N.C.	1 Nov. - 9 May	80 - 90	Carter
Salisbury, N.C.		120	Owens
Hickory, N.C.		20	Underwood
Gastonia, N.C.	31 Dec. - 11 May	73	Hampton
Charlotte, N.C.	10 Dec. - 27 April	26	Norwood
Hartsville, S.C.	14 Dec. - 17 April	100 - 125	Morrison
Eastover, S.C.		70	Faver
Clemson, S.C.	28 Dec. - 1 April	16	Gage
Aiken, S.C.	28 Dec. - 6 May	25 - 30	Hatcher
N. Augusta, S.C.	20 Dec. - 2 May	25 - 30	Knighton
Mountain			
W. Jefferson, N.C.	10 Jan.- 15 April	100	Rader
Boone, N.C.	Mid-Dec. - Mid-April	50	Simpson
Swannanoa, N.C.	13 Dec. - 9 May	67	Ruiz
Hendersonville, N.C.		19	Raymond
Brevard, N.C.	Mid-Dec. - Mid-April	50	Crunkleton
Highlands, N.C.	Mid-Dec. - Mid-April	50	Hutchinson

Grosbeaks, logging the dates of arrival, largest flocks seen, and departure times. This information, summarized in Table 2, gives an overall picture of the breadth and magnitude of the grosbeaks' invasion.

At Southern Pines, N.C., Jay Carter reported banding 307 Evening Grosbeaks, 874 Purple Finches, 395 Pine Siskins, and 4 Red Crossbills. Active banding programs were also carried on at Rocky Mount, Raleigh, Chapel Hill, Hillsborough, Reidsville, and Winston-Salem. In all, over 6,000 northern finches were banded in North Carolina last winter. Recoveries of a number of previously banded birds were also recorded, yielding the information tabulated in Tables 3, 4, and 5.

HOUSE FINCHES

With this species we are seeing a very interesting story unfold. From an introduced colony on Long Island, New York, House Finches have steadily expanded their range along the eastern seaboard. They have been making winter appearances in North Carolina

since 1962 and first reached South Carolina during the winter of 1966-1967 (*Chat*, 31:45-49, 1967). This last season they staged what could be called an "invasion," with occurrences widely spread over the piedmont and as far south as Sumter, S.C. It was by far the strongest influx of House Finches yet recorded in the Carolinas. The locations of the sightings are mapped in Figure 1. Specific dates, places, and numbers of birds seen are listed in Table 6.

It will be fascinating to watch what happens during the next few years as the eastern population of House Finches continues to grow. Almost certainly we will see larger and larger numbers of these birds wintering in the Carolinas. Also there is a possibility that nesting will eventually take place in the region. To document future events, it is important for us to watch closely for House Finches. Tips and photographs to aid identification are given in the June 1967 issue of *Chat*, (31:48-49).

TABLE 3. *Pine Siskin recoveries.*

Date Banded	Banding Location	Date Recovered	Place Recovered
26 Jan. 1969	Middleboro, Mass.	4 April 1970	Southern Pines, N.C.
1 Feb. 1969	Raleigh, N.C.	7 April 1970	Chapel Hill, N.C.
25 Mar. 1969	Raleigh, N.C.	5 March 1970	Chapel Hill, N.C.
1 Jan. 1970	Chapel Hill, N.C.	4 April 1970	Chevy Chase, Md.

Table 4. *Evening Grosbeak recoveries.*

Date Banded	Banding Location	Date Recovered	Place Recovered
9 Feb. 1964	Schenectady, N.Y.	7 April 1970	Chapel Hill, N.C.
4 May 1966	Manchester, N.H.	9 April 1970	Chapel Hill, N.C.
1 Mar. 1969	Knoxville, Tenn.	17 March 1970	Chapel Hill, N.C.
11 Apr. 1969	Raleigh, N.C.	5 Feb. 1970	Chapel Hill, N.C.
19 Dec. 1969	Mt. Pocono, Pa.	13 Jan. 1970	Chapel Hill, N.C.
24 Dec. 1969	Southern Pines, N.C.	28 March 1970	Raleigh, N.C.
26 Jan. 1970	Chapel Hill, N.C.	8 April 1970	Raleigh, N.C.

TABLE 5. *Purple Finch recoveries.*

Date Banded	Banding Location	Date Recovered	Place Recovered
27 Jan. 1966	Chevy Chase, Md.	4 Dec. 1969	Chapel Hill, N.C.
16 Mar. 1966	Yorktown, Va.	23 Feb. 1970	Chapel Hill, N.C.
26 Feb. 1967	Ada, Michigan	27 April 1970	Chapel Hill, N.C.
24 Jan. 1968	Chapel Hill, N.C.	30 Jan. 1970	Mt. Olive, N.C.
1 Nov. 1968	Fairlee, Md.	12 Feb. 1970	Chapel Hill, N.C.
15 Mar. 1969	Nashville, Tenn.	4 April 1970	Chapel Hill, N.C.
29 Apr. 1969	Moultonboro, N.H.	7 April 1970	Chapel Hill, N.C.
23 Dec. 1969	Southern Pines, N.C.	9 March 1970	Manning, S.C.
3 Jan. 1970	Southern Pines, N.C.	10 March 1970	Chapel Hill, N.C.
3 Mar. 1970	Chapel Hill, N.C.	22 March 1970	Hillsborough, N.C.
30 Mar. 1970	Chapel Hill, N.C.	27 April 1970	Ridgewood, N. J.

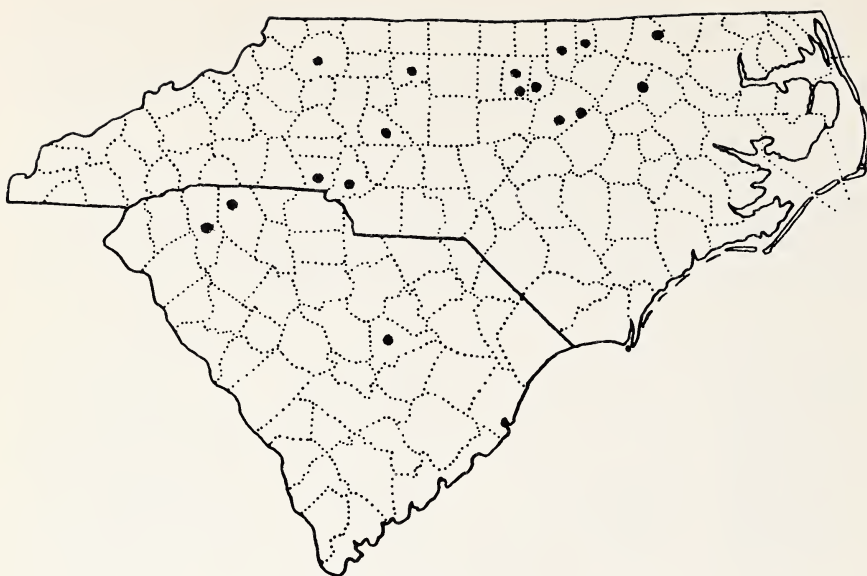


FIGURE 1. *Distribution of House Finch sightings in North and South Carolina during the winter of 1969 - 1970.*

TABLE 6. *Occurrences of House Finches in the Carolinas during the 1969 - 1970 season.*

Place	First Date - Last Date	Maximum Count	Observers
Oxford, N.C.	8 January - 1 April	25	Lappi
Henderson, N.C.	1 January - late March	27	Harris
Roanoke Rapids, N.C.	7 February	2	Lynch
N. Wilkesboro, N.C.	2 April	1	Smith
Winston-Salem, N.C.	21 December - 21 March	2	Snavelly, Witherington
Hillsborough, N.C.	15 November - 1 January	2	Blake
Chapel Hill, N.C.	Late October - 28 March	8	Geist, Lappi
Durham, N.C.	mid-winter	5	Pyne, Stuart, Pulliam
Rocky Mount, N.C.	Late December - late March	53	Davis
Raleigh, N.C.	21 January - 28 March	10	Grant, LeGrand
Wendell, N.C.	9 January	2	Underhill
Salisbury, N.C.	29 January - 25 March	6	Owens
Charlotte, N.C.	6 December - 11 March	1	Norwood
Gastonia, N.C.	17 November - 7 April	7	Hampton
Greenville, S.C.	12 January - 14 April	5	Grimm, Nickerson
Gramlin, S.C.	18 December	1	Woodfin
Sumter, S.C.	25 December - 30 March	1	Dabbs

RED CROSSBILLS

Red Crossbills were unusually abundant in the mountains. A total of 275 were tallied on 28 December in the Great Smoky Mountains National Park, the largest number ever recorded there in a Christmas count. Mark Simpson, on several fall and early winter visits to the Mt. Mitchell area (elevation 6,100 to 6,684 feet), found Red Crossbills in flocks up to 150 birds. Fred Behrend reported flocks of several hundred on Roan Mountain during January and February.

But a real surprise of the season was a general influx of Red Crossbills into the piedmont. In the past, even in peak finch years, Red Crossbills have usually appeared only in the higher North Carolina mountains and have seldom wandered in significant numbers into other sections of the region. This time they ranged from the mountains over much of the piedmont area. Because nothing like this has happened in recent memory, it is worthwhile to mention the various places where they were seen. Christmas counts showed them present at North Wilkesboro, Elkin, Winston-Salem, Greensboro, Chapel Hill, Raleigh, Southern Pines, and Charlotte (see *Chat*, 34:10-19, 1970). Later in the season they were found at Roanoke Rapids, Hillsborough, Statesville, Hickory, Salisbury, Tryon, and down into South Carolina at Greenville and Clemson. Thus, their range extended over most of the region west of the fall line. In addition, there was a single coastal occurrence reported from Bodie Island where 14 Red Crossbills were sighted on the Christmas count, 30 December.

From first sighting to last, the winter stay of Red Crossbills in the Carolina piedmont extended over 7½ months. They were first seen on 5 November (Raleigh) and last seen on 20 June (Chapel Hill). Through the whole period, the birds seemed to have no difficulty finding adequate natural food, for they generally shunned backyard feeders. At Chapel Hill, I frequently observed small flocks of 6 to 15 Red Crossbills foraging in the tops of pine trees. Pine seeds seemed to be a favorite food.

Sixty Red Crossbills were counted at Umstead Park near Raleigh on 22 November (LeGrand). This was probably the largest single concentration seen outside of the mountains, although flocks of 40 to 50 were reported during mid-winter at Winston-Salem and Statesville.

WHITE-WINGED CROSSBILLS AND COMMON REDPOLLS

White-winged Crossbills were present on the higher mountains, but apparently none ventured down into the piedmont. Two were recorded on the Christmas count in the Great Smoky Mountains National Park, 28 December. On 1 February, a party led by Fred Behrend found at least 250 White-wings in mixed flocks with Red Crossbills on Roan Mountain (elevation 5,500 to 6,285 feet).

Three sightings of Common Redpolls were reported. On the coast at Bodie Island, N.C., two redpolls were found on 30 December (Christmas count) and one was present at Hertford in Perquimans County, N.C., during January (*Chat*, 34:51, 1970). In the mountains a single redpoll briefly visited Bob Ruiz's feeder at Swannanoa, N.C., on 3 February.

PINE GROSBEAKS

Pine Grosbeaks have been rare visitors during previous northern finch invasions. There are only seven published records for the Carolinas (see *Chat*, 33:1-2, 1969), and no specimens have yet been taken in the region. It is therefore significant to report two new occurrences this past season. The first sighting came in late fall from the mountains when, on 30 November, Mr. and Mrs. Garvin Hughes found a small flock of six Pine Grosbeaks in spruce-fir forest on the North Carolina side of Roan Mountain. These birds were studied in good light for several minutes as they foraged in the top of a fir tree. The second record of the season came in late spring when Dan F. Keeney of Falls Church,

Virginia, while on a visit to Raleigh, N.C., found two Pine Grosbeaks on the grounds of Plantation Inn, 5 miles north of the city. Dr. Keeney's description of the incident follows:

"On Saturday, 30 May, 1970 at 7 AM, in the tall pine trees in front of the Inn, I saw two birds that appeared to be grosbeaks feeding on pine cones. The morning was heavily overcast and it was difficult to see any identifying color on them, but I watched them for about 25 minutes with Zeiss 8 x 50 binoculars, during which time they moved several times, but would spend long periods working on a single pine cone. Eventually I was able to distinguish that one bird was dark red with dark wings and white wing bars and the other was a dull buffy gray, also with white wing bars. They were undoubtedly a pair of Pine Grosbeaks. I did not hear any distinctive song, but only occasional weak, nondescript cheeps.

"It is my impression that these birds were way out of their territory and that 30 May was certainly unusually late for any sighting this far south, but there is no doubt in my mind that they were Pine Grosbeaks."

ACKNOWLEDGMENTS

The information compiled in this report came from observations made by the contributors listed below. The excellent data they provided will have lasting usefulness when future finch invasions are compared with last season's events.

North Carolina	Wendell - Mrs. W. J. Underhill
Brevard - Charles F. Hutchinson	West Jefferson - Mrs. Jennings Rader
Burlington - Mrs. Philip Worster	Winston-Salem - Charles M. Frost, Mrs. Ralph Hanes, Page and Fred Hill,
Cary - Gwen Turbiville	Ruth Hill, Royce Hough, Sue Moore, Ramona Snively, R.H. Withering-
Chapel Hill - Helen Crockford, Robert M. Geist, Mrs. Ed Lappi, Elizabeth P.	ton
Teulings	Zebulon - Eloise Potter
Charlotte - Mr. and Mrs. Joe Norwood	
Durham - Gard W. Otis, Johnnie Payne, Ron Pulliam, George and Mary Pyne,	South Carolina
Wilma Stuart	Aiken - John B. Hatcher
Franklin - Mary Enloe	Campobello - Mrs. Walter Gibson
Gastonia - Mrs. Herbert Hampton	Charleston - Ted Beckett
Greensboro - Eta Schiffman	Clemson - Gaston Gage, Mrs. Kenney R. Helton
Henderson - Mrs. Sam Harris, Mr. and Mrs. A. W. Bachman	Due West - J.D. Copeland
Hendersonville - Rudolf G. Hosse, Ralph Raymond	Effingham - Annie R. Faver
Hickory - Louise and Garvin Hughes, Garnet and Ronald Underwood	Granlin - E.C. Clyde
Highlands - Toliver Crunkleton	Greenville - Lida Woodfin
Hillsborough - Charles Blake	Greenville - Barbara Nickerson, Jay Shuler, William Grimm
Lenoir - Clara and Ed Manchester, Mary and Fred May	Hartsville - Mrs. A.E. Morrison
Morehead City - Charles R. Lincoln, Bob Simpson	Landrum - Mrs. Neil Skelton
New Bern - E.T. Card, Mrs. Leland Mason	ML Pleasant - Mrs. C. E. Kuhlman
North Wilkesboro - Wendell P. Smith	Mullins - Edward C. Bethee
Raleigh - Gilbert Grant, Robert Hader, Edmund LeGrand, Harry LeGrand,	North Augusta - Gerald Kingthon
Gail Whitehurst	Sumter - Evelyn Dabbs, Edna McDonald, Helen Snider
Reidsville - Ruth and Bill Noonan	
Roanoke Rapids - J. Merrill Lynch	Tennessee
Rocky Mount - Betty and Lloyd Davis	Fred W. Behrend
Salisbury - H. Mack Owens	
Southern Pines - Jay Carter, III	Maryland
Statesville - Marcus B. Simpson Jr.	Carl W. Carlson
Swa...nanao - Robert C. Ruiz	
Tryon - George Alderson, Mrs. Boyd Dunbar, Carol Grenell, Elizabeth	Virginia
MacGregor	Dan F. Keeney
	Mrs. Mark Snyder



BIRD WATCHERS'

Roundtable

So many people have asked me about how to find Saw-whet Owls that I have decided to write it all down for everyone who is interested in searching for these tiny raptors. If you have a favorite species, why not write up a similar article to share with CBC members through the Roundtable?—MBSJr.

In Quest of the Saw-whet Owl

MARCUS B. SIMPSON JR.

Of all the birds known to occur in the Carolinas, the Saw-whet Owl (*Aegolius acadicus*) remains to this day one of our most elusive and unfamiliar species. To professional and amateur alike, this tiny owl has been one of the most perplexing and poorly understood members of the American avifauna. Following the original description of the Saw-whet by Gmelin in 1788, no less than twenty different scientific names have been given to this diminutive raptor, while the juvenile birds, whose plumage is so different from that of the adults, were regarded as a distinct species for many years. Elliott Coues, in his fascinating book *Birds of the Northwest* (1874), pointed out that even in the late 19th Century, many reputable ornithologists regarded the dark, chocolate-brown young as a separate species known as the White-fronted Owl. This famed surgeon-ornithologist put the controversy to rest, however, with his typical Couesian tongue-in-cheek remark that every nest of the Saw-whet Owl which he had examined contained young of the White-fronted Owl, possibly suggesting that the latter species might be the Cowbird of the owl family! Not surprisingly, the issue was never raised again; and the White-fronted Owl became one of the few extinct species that man destroyed with ink rather than guns.

Even today, practically nothing is known with certainty about the behavior of this secretive bird, except for its remarkable tameness. In his *Life Histories of North American Birds of Prey*, Bent mentions the ease with which the Saw-whet may be lured by a whistled imitation of its song; and he relates the humorous account of one lighting on the head of a friend who was calling the owls in Massachusetts. Brad Hawkins, former director of the Greensboro Junior Nature Museum, captured a young Saw-whet in his mist nets at Mt. Mitchell in 1965; and following its release, the bird not only showed no signs of alarm but refused to leave the area. Sitting contentedly in the

tree where it had been placed, the owl remained at the banding station and watched the activities of the ornithologists until they departed some time later! And of course, almost every birder has heard tales of people's capturing the bird with their bare hands, not to mention the innumerable comments in the literature about its unusually tame disposition.

Until recent years, ornithologists in North Carolina regarded the Saw-whet as a winter visitor only, with no evidence that the bird might be present throughout the entire year. Largely through the efforts of Arthur Stupka, who served for over 30 years as Chief Naturalist for Great Smoky Mountains National Park, it has been discovered that the Saw-whet Owl inhabits certain of the higher mountain ranges in the state throughout the spring and summer months. Although the bird occurs throughout the state during the winter, it seems to be largely a matter of luck to stumble across one during this season. Paul Sykes, for example, was predictably startled when a Saw-whet flew into his car as he sped toward the Outer Banks late one night! Unfortunately, most of us do not possess such "animal magnetism" and we must head to the high country and search out the owl ourselves; it simply will not come to us!!

Finding the Saw-whet Owl during the breeding season requires the right combination of many variable factors; and even with proper effort, Lady Luck often seems determined to foil our best efforts. Nevertheless, the quest for this elusive raptor holds excitement enough to compensate for the feeling of frustration which not infrequently darkens the brow of the seasoned owl chaser. The following observations, based on years of field work, should make your search more pleasant and hopefully productive. In passing, I might urge you to report all records of the bird which you happen to find. There is still a great deal to be learned about the bird, and every observation has significance.

LOCALITIES: Saw-whet Owls are found in the forests of red spruce (*Picea rubens*) and Fraser fir (*Abies fraseri*) which cover many of the higher peaks in the Great Smoky, Great Balsam, Plott Balsam, Roan, and Black Mountains. The best spot for the bird is in the Smokies, along the road from Newfound Gap to Clingman's Dome. Collin's Gap, about halfway along this route, seems to be a favorite resort for the Saw-whet; but the bird is not infrequently reported at Newfound Gap, Indian Gap, the Spruce-fir Nature Trail, and at Clingman's Dome parking lot. Outside the Smokies, the next best area is along the Blue Ridge Parkway between Asheville and Cherokee. In this region, between milepost 420 and 431.4, there are numerous records of the Saw-whet. The two best places are at the Devil's Courthouse Overlook and Haywood-Jackson Overlook near Richland Balsam. There are nature trails leading into the woods at both of these sites, and the owls are heard from the parking lots and occasionally seen along the trails. The only other area where you are likely to find the owl is at the campground in Mt. Mitchell State Park, where the bird has been heard and seen practically every summer since the late 1940s. The picnic ground at the top at Mt. Mitchell is also a good spot for Saw-whets.

SEASON: The best time to search for the Saw-whet Owl is during the two-month period from the second week of April through the second week of June, although the first two weeks of May seem to be the peak of the season. The owls' calling is pretty much confined to this period, and field work before or after this period is likely to be fruitless.

TIME OF THE DAY: The two hours preceding dawn is the best time to hear the owl, but practical considerations usually make it preferable to search during the two or three hours following sunset.

CALLING: Like all other owls, the Saw-whet is located by listening for its calls, which are quite distinctive. The most commonly heard "song" consists of a long series of resonant, monotonous cooing notes repeated at the rate of about 2 per second and often lasting for several hours. Under ideal wind conditions, these notes carry quite some

distance. Imitating the call by whistling is a very effective way to get the owls calling and often results in their approaching close enough to be observed in a flood light.

WEATHER CONDITIONS: Weather seems to have little effect on the owls' calling, but it has a tremendous effect on your ability to hear it. Winds in excess of 5 miles per hour produce such a roaring in the trees that it is almost impossible to hear the call notes. If the winds are whipping around the peaks, you might as well forget it, head back to the motel, and watch the late show!

SUGGESTED EQUIPMENT: Obviously a flashlight is indispensable if you intend to see the Saw-whet. However, with the weather being what it is on these high peaks, it is smart to take along hot tea or coffee and something to nibble on. This will not only be physically refreshing but will keep your mind and reflexes alert for the return trip down the winding mountain roads.

WARNING: In April and May the mercury plunges at night in these high altitudes, and you should come with clothing suitable for cold and occasional freezing weather. Furthermore, ice and snow often persist in sheltered areas, making car travel hazardous until late April. It doesn't hurt to inquire about road conditions before going up and to stay alert even if everyone says the roads are clear. Even during July and August, the temperature often drops into the low 40s, so come prepared. Fog is a treacherous enemy and is also one of the most characteristic features of these mountains, a fact which should be remembered at all times. If you haven't pulled out your maps by this point and discovered to your horror that these owls are found a long way from civilization, I will point out to you that you can anticipate a drive of at least 30 to 45 minutes from these high peaks to the nearest motel, gas station, or restaurant. Make sure you have plenty of gas before you leave; take something along to eat; and have your accommodations in order before taking off. One last suggestion: these spruce-fir forests are notoriously dangerous places for wandering about, and I strongly suggest that you stay on the road or overlooks. More than one seasoned hiker has disappeared forever in these woods, and such famed explorers as John Cairns and Elisha Mitchell have been killed while exploring such forests. Countless others have received painful and often serious injuries in these wet, slick, moss-covered mountains; and night makes the area even more dangerous.

POSTSCRIPT

Visualize your car parked beside the road on a high, desolate mountain, miles from the nearest town. Sunset was hours ago; the night is pitch black, cold, and forbidding. As you stumble about in the darkness, gawking at the trees, a Park Ranger or fellow tourist happens along. Almost invariably, they will stop and inquire about your present condition: "Are you sick? Has the car broken down? Do you need some help? Say, what are you doing here, anyway?!" The best answer, 'though painful, is an honest one. This will be followed by an awkward silence, a look of disbelief (often ill concealed), and occasionally a vague sense of apprehension on the part of the good Samaritan. Once the situation becomes clear to the inquirer, he will either gun the engine and beat a hasty retreat (fearing the worst) or else he is likely to chat amiably about the time a Screech Owl flew down his aunt's chimney. At any rate, patience and appreciation for his concern over your welfare are in order, even though he has interfered with your owl listening.

I will never forget just such an event during the early hours of one cold May morning. It was 2:30 AM and here I was standing in the Parkway on Richland Balsam listening for Saw-whet Owls. A dense, impenetrable blanket of fog covered the entire range, obliterating everything except the white line in the middle of the road, and a drenching rain fell through the near-freezing night air. I had been contentedly listening to a Saw-whet calling from the dark-shrouded peak above the road, when the dim lights of a camper bus suddenly appeared out of the blinding fog. Clad in a leather jacket and filthy blue jeans, I stood passively in the road with a Texas cowboy hat on my head and a long,

black machete in my hand. Spotting me, the driver stopped suddenly (at a safe distance), rolled down the window, and inquired in a hesitating voice:

"Now far is it to Asheville?"

"About 40 miles," I answered.

The man's wife and children were obviously uneasy about my being at this desolate spot in the middle of the night, and the driver eyed my machete nervously.

"I'm almost out of gas," he cried. "I can't make it that far. Isn't there a gas station nearby?"

"No," I replied. "You are at least 30 to 40 miles from the nearest town, and most of the stations are closed at this hour."

"But we've been on the Parkway all night. Aren't there homes or something around here?" he inquired.

"No," I answered. "I expect we are the only people for 30 miles in either direction."

This did nothing to calm his growing anxiety, so he inquired further, "Do you live nearby?"

"Ah, then you must be camping here," he said hopefully.

"Nope," I responded, growing irritated that this cross-examination was interfering with my owl-listening.

Becoming increasingly apprehensive, the man finally mustered the courage to inquire, "Say, do you mind if I ask what you are doing up here?"

"I'm just listing for Saw-whet Owls," I replied.

"Eh, what was that again?" he cried.

"I said I'm listening for Saw-whet Owls," came the answer.

His wife, visibly agitated by this point, began shouting at her husband, who hit the gas and vanished into the dark night, leaving me in the rain. It occurred to me that she may have heard me saying something about sawing, whetting, and awling; and fearful that they had encountered an insane child-chopping, machete wielding killer, they undoubtedly were thankful to have escaped unharmed.

On such nights, when the weather is wretched, I have heard the Saw-whet Owl give a call that sounds like a laugh. I suspect they are laughing at me.



Conservation

. . . with Marie Mellinger

The Windigo Spirit

There is a Carolina legend of a spirit, called the Windigo, that watches over the woods and waters, and lures people into the wilderness. Once they have been touched by his hand they will forever feel a kinship for the good earth and all growing things. He walks softly over the mountains with the lightly falling rain. We see the glow of his ceremonial pipe touching the evening sky. Now he must cry with anguish at what we are doing to his beautiful world.

Two new threats are eminent, one a proposed Forest Service timber sale, plus 5 miles of new roads around the Standing Indian Natural Area, 2 miles across the George state line in Clay County, N.C. This is part of a proposed new road linking US 76 and US 64, and would despoil some of the most beautiful natural woodlands left in both Georgia and North Carolina.

The second threat proposes a paved road through the Joyce Kilmer Memorial Forest, in Graham County, N.C. A complete report on this road is available from ECOS, P.O. Box 1055, Chapel Hill, N.C. 27514. All citizens should act immediately to stop both of these proposed plans. Thomas W. Richards, president of Nature Conservancy, wrote, "There are large desecrations practiced against our environment (like the pollution of an entire river system), and there are small desecrations (like the pulling of a ladyslipper). Enough small sins committed against a woodland or a field or a marsh can devastate it just as surely as a gust of fire or a rain of insecticide." We must speak out on the major issues and watch our own actions. Let us feel that we have a part in helping the Windigo Spirit watch over his country.

New and Timely

Chapel Hill has one of the five existing chapters of ECOS, Inc. They will send complete information about ECOS to anyone interested. They will send a monthly newsletter to everyone on their mailing list. They have assembled ECO-KITS, available

for \$4.50, which include copies of Paul Ehrlich's book, *The Population Bomb*, an Environmental Teach-In Handbook, reprints of ecology articles from leading magazines, and much useful information on environmental problems. Any or all information or ECO-KITS available from Chapel Hill.

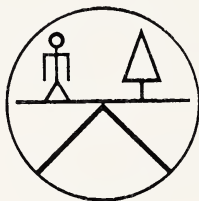
The Conservation Council of North Carolina offers memberships beginning at \$3.00 per year payable to Dr. Charlotte Dawley, 114 South Mendenhall St., Greensboro, N.C. 27403. Membership includes a vote on CCNC business. Their current fight is to save Baldhead Island.

A Bartram Trail Society, 688 Marsh Avenue, Lithia Springs, Georgia, has been organized for all fans of the gentle Quaker. Trails are proposed and will be marked following his routes through the Carolinas, Georgia, and Alabama. For \$10.00 you can still become a charter member.

Interior Secretary Hickel has issued a flat ban against the use of some 16 pesticides on all Department of Interior managed lands.

Interest in ecology has grown to the point that there is a new Ecological Book Club, headquarters, Box 682, Rye, N.Y. 10580.

You will probably be seeing more and more of a new symbol, showing man in balance with nature, being used by many conservation minded organizations, and proposed as a US postage stamp.



Let us remember John Muir's words: "When we try to pick out anything by itself we find it hitched to everything else in the universe."

And we like Ken Morrison's Strange American, sent us by W.G. Duncan.

THE STRANGE AMERICAN

1. declines to cut down a dead tree, for he knows woodpeckers and bluebirds may nest in it.

2. He does not burn over his land to "neaten up the place", but lets brown grasses and wild flowers have their sway.

3. He leaves some brush piles and fence rows for wrens, and thrashers, and towhees, for rabbits, squirrels, chipmunks, and raccoons.

4. He leaves underbrush so he can observe nature's natural succession, and how the wildlife community changes as the vegetation matures.

5. He respects swamps and marshes. He enjoys the wildlife with which he shares the land. He lives in harmony with the land.

Carolina Birds and Birders

. . . with Willie Morrison

Hartsville's Golden Grosbeak

WILLIE M. MORRISON

Oh! He's gorgeous!

Looks like something that escaped from the tropics!

He looks more like one of those white-winged canaries one sees now and then!

Such remarks filled the air of the dining room at the home of Mrs. G.A. Kalber, 805 E. Home Avenue, Hartsville, S.C., for four days, 8 through 11 January 1970, while bird lovers gathered to watch the golden grosbeak at her feeder.

Mrs. Kalber telephoned me shortly after 9:30 Thursday morning, 8 January, to ask me what kind of bird was on her feeder. "He is bright lemon-yellow all over his body with snow-white wing and tail feathers. There are no black, brown, or gray feathers anywhere on him."

In my ignorance I answered that there was no such bird that I knew of unless it was someone's Canary that had gotten loose. "He's too big to be a Canary," Mrs. Kalber protested, "more the size of the Evening Grosbeaks. He came in with the flock this morning and has been feeding with them ever since." Then I knew it was time to put out a Rare Bird Alert.

Our golden grosbeak had the pale yellow-green massive conical bill and light pinkish feet and legs of the normal Evening Grosbeak. In contrast to the yellow body, the black eyes appeared unusually large and bright. Ever alert and observant as he perched in a large cedar tree or cherry laurel or dogwood, he seemed to be a loner, giving the impression of waiting for the others to come to the feeders first. If there were any birds too close to him, whether grosbeaks, Purple Finches, American Goldfinches, or Pine Siskins, he would peck at them in a feisty and belligerent manner, making them move over or fly away. At the least disturbance he was the first to fly into a tall tree.

Among those who responded to the Rare Bird Alert were Mr. and Mrs. E. Calvin Clyde Jr. of Effingham, S. C. Mr. Clyde, an experienced bird bander, agreed that the strange bird was an Evening Grosbeak in aberrant plumage and photographed it feeding on the windowsill. Outdoors he left his blind set up within camera range of the feeders in preparation for the bird's return on Sunday morning.

Deciding that the golden grosbeak had left Mrs. Kalber's feeders for the day, I returned home shortly after noon on Saturday. Imagine my surprise and excitement when I glanced up into the big oak and there he was staring at me! At 9:00 Sunday morning the cause of all our excitement was back in my yard perched in a big cherry laurel, then onto the feeder where he made himself quite at home for the rest of the morning. For the first time I did not want a rare specimen on my feeders. Why? Because a mile east of my house Calvin Clyde had arrived at Mrs. Kalber's and was patiently

waiting in his blind to photograph the golden grosbeak. But he waited in vain. The golden grosbeak never reappeared after leaving my house Sunday morning.

Later I found out that the bird had spent some time at the feeding station of Mr. and Mrs. Hugh Campbell, about half way between my house and Mrs. Kalber's.

On 16 January Mrs. Tommy Dabbs (now CBC president) and Mrs. Edgar G. Kilby (now CBC secretary) of Sumter, S.C., came to spend the day with me. As a special treat I had some slides to show them. I wanted them to guess what kind of bird it was and would tell them nothing about it. As soon as the first slide flashed on the screen Mrs. Dabbs exclaimed, "Where did you get pictures of my albino Evening Grosbeak? He stayed at my feeders three weeks last year!" With the instant recognition of both these birders and their spontaneous responses, I knew that our golden bird had been seen the spring before in Sumter, 40 miles away. Mrs. Dabbs had written me about the "perfectly beautiful" albino, but she had not stressed the yellow coloration. I had a mental image of a nearly pure white bird. The bird was being pecked on by other grosbeaks at her feeders on 4 February 1969. He stayed around for about three weeks, usually eating after the others started to leave.

What is an Albino?

Intrigued by the appearance of our golden grosbeak, I began writing letters to people who might have useful information on albinism. I searched the material available at the Coker College Library. Librarian Elizabeth C. McNair and her associate, Mary M. Hunter, were most kind and helpful. Through Interlibrary Loan they obtained photoduplications of many articles not available locally.

Color in birds is produced in two ways: By pigments or by the physical structure of the feathers. Pigments are of two main sorts, MELANINS and LIPOCHROMES. Melanins produce the black, dull yellow, and the brown colors. Lipochromes, on the other hand, produce the orange, yellow, and the red colors, rarely the violet, blue, and green colors. (*The Life of Birds*, Joel Carl Welty, Alfred A. Knopf, New York, 1963, p. 44)

ALBINISM is a reduction or absence of pigment in feathers, usually melanins (dark feather pigments). There are four degrees of albinism in birds: TOTAL ALBINISM, when pigment is totally absent from plumage, irises, and skin; INCOMPLETE ALBINISM, when pigment is totally absent from plumage, irises, or skin, but not from all three; IMPERFECT ALBINISM, when pigment is reduced (diluted) in any of all three areas but never completely absent from any one; PARTIAL ALBINISM, when pigment is completely or partially absent from parts of any or all three areas. Of the four degrees of albinism, partial albinism is the commonest. It frequently involves only certain feathers (such as the primaries), often in a symmetrical pattern with each side of the bird being affected in the same way. (*A Laboratory and Field Manual of Ornithology*, Olin S. Pettingill Jr., Burgess Publishing Co., Minneapolis, Minn., 1946, p. 143)

Albinism may have an inheritable genetic basis. It may also develop in an individual bird as a result of a physiological disturbance such as an injury or improper diet. Albinism resulting from injury is usually not symmetrical and may involve only a single feather.

The opposite of albinism is MELANISM, an undue blackness in birds that implies an excess of pigment. Two other aberrations are XANTHOCHROISM and ERYTHRISM, terms applied respectively to abnormally yellow or red birds. These three phases of color are, as a rule, shown in caged birds and are evidently due to unnatural diet or other abnormal conditions.

My inquiry directed to the Laboratory of Ornithology, Cornell University, brought the following reply from James Tate Jr., assistant director:

"Your bird appears to lack the dark pigments that normally mask or reduce the evident yellow - hence it is the opposite of melanistic. Melanin is the black-brown pigment which birds manufacture and deposit in their dermal structures. The reduction or lack of melanin is usually called incomplete or complete albinism. A patchy distribution of melanin is partial albinism.

"The reds, oranges and yellows in bird plumage come from plant pigments in the diet. The ability to convert and deposit them is not related to the ability to manufacture melanins."

After viewing a slide of the Hartsville grosbeak, Dr. Joel Carl Welty commented in a letter dated 26 March 1970:

"I am very sorry that I cannot help you appreciably with your Evening Grosbeak problem. I have never seen a grosbeak with similar plumage and I can only guess at its cause.

"As a guess, I would say that the bird has suffered a gene change altering the enzymes that regulate melanin production, at least in the feathers. I think that you are probably correct in assuming that zooxanthin is still fully expressed in your yellow bird, even in the normally black head. Here the yellow is normally covered over with the black pigment, but in this mutant (?) bird, only the yellow survives and hence the head looks pure yellow . . . Color abnormalities take strange turns in birds, and in other animals as well."

This must also be the explanation for the "strange lemon-coloured bird very like an overgrown canary" seen by M.W. Holdom at Crescent, British Columbia, Canada, on 22 September 1947. Holdom expressed the opinion that his aberrant Evening Grosbeak if seen away from the flock would be "taken for some rare visitant from the tropics." (*Canadian Field-Naturalist*, 1948, Vol. 62, p. 164)

Robert C. Ruiz, 300 Wilson Avenue, Swannanoa, N.C., reports an albinistic Evening Grosbeak:

"The first observation was made on 21 January 1969 at 12:05 PM from the kitchen window where a white bird was seen among the feeding grosbeaks. It proved to be an albino Evening Grosbeak with black eyes and a tinge of yellow on the neck. The second observation was in Black Mountain, about three miles away, in the yard of Mr. and Mrs. W.A. Allison, 120 Church Street.

"On 8 February it was spotted by my son, Charles, on the drive and flew to the sunflower seed feeder. The other grosbeaks paid no particular attention to it as far as shunning it or trying to drive it away. It visited us again on 17 February and for the last time on the 25th for the early morning feeding in company with other grosbeaks.

"A friend in Asheville told me that she had had a white Evening Grosbeak at her home twice in March."

Could Mr. Ruiz and his friends have seen a female Evening Grosbeak afflicted with the same type of albinism seen in the Hartsville bird? I think a female without melanins would show very little yellow pigmentation compared to the male.

Imperfect albinism has been reported in female Evening Grosbeaks (*Canadian Field-Naturalist*, 1949, Vol. 63, p. 115, and Eloise F. Potter, pers. com.). In both cases the reduction of melanins left the bird a dirty white in general appearance. The wing and tail feathers were light brown and white instead of black and white. The yellow on the nape was prominent.

Elizabeth Teulings, T.A. Beckett III, and Eloise Potter all report having handled female Evening Grosbeaks with a halo of white feathers on the crown. H. Mack Owens reports from Salisbury, N.C., a male Evening Grosbeak that was "out of the ordinary in that the yellow on the head, rather than ending in points behind the eye, continued around and completely encircled the head. This gave him the appearance of wearing a yellow halo."

W.J. Underhill, of Wendell, N.C., writes about a bird that exhibited the patchy distribution of melanin typical of partial albinism:

"The albino evening grosbeak that we had some three winters ago was completely white except for a very few dark feathers scattered along the wings. It stayed in this area some two or three weeks and fed along with the other grosbeaks. I have not seen it since. There have been some reports of one in Raleigh, N.C., this winter that seems to be an absolute duplicate of the one that we had. The eyes of this bird were not pink."

Incidentally, the pink eyes associated with albinism are caused by blood showing through from the capillaries. This may also give a pink hue to certain skin areas.

C. Chandler Ross, research associate, The Academy of Natural Sciences, Philadelphia, lists nine sight records of partially albino Evening Grosbeaks in his paper "Albinism Among North American Birds" (*Cassinia*, 1963). He found that albinism is recorded most frequently in the Robin, followed by the House Sparrow and the Common Crow.

While Hartsville's golden grosbeak had a counterpart in the bird seen in Canada 23 years ago, he was unusual and beautiful enough to create throughout the Carolinas a great deal of curiosity about plumage variations. Some of the very interesting letters pertaining to other species are quoted below.

Yellow and Orange Cardinals at Charleston

It appears that "off color" birds are on the increase or else we have a greater number of keen observers. We have a Common and a Boat-tailed Grackle that appear to be complete albinos, in the Charleston area since last summer. We also have a partial albino crow and Red-winged Blackbird.

We have at present a YELLOW male Cardinal under observation. He has the black mask but the remainder of the body, wings and tail are yellow. He is in the bird sanctuary of the Charleston artist-ornithologist, Mrs. Anne Worsham Richardson.

In Summerville, S.C., there is an orange male Cardinal that I have not seen but have had reports of it from three people. It visits feeders regularly. I have the skin of a cream colored male Cardinal that has no black bib. It is interesting that this male raised (fathered) two broods in which the primary wing feathers showed cream colored feathers. The color factor was apparently sex-linked on the male side as none of the five female young in the broods were affected by unusual pigment.--T.A. BECKETT III, Magnolia Gardens, Charleston, S.C.

Albinistic Female Red-winged Blackbird

I will try to give you a rundown on the Red-winged Blackbird. There was enough brown on the head to see, indistinctly, the usual striping. There were a few dark spots on the under-tail coverts and belly, but very few. The most unusual markings were the pink shoulders! The rest of the bird was white. The pink shoulders and the striped head would have suggested an immature male but I saw this bird, in company with a normally marked male, as a pair. As usual, he acted as the lookout, and she alone feeding young, both in and out of the nest. (I have it recorded on film.) She had to be the female.--H. MACK OWENS, P. O. Box 666, Salisbury, N.C. 28144

White-headed Field Sparrow

At our feeding station last spring, 1969, a white-headed Field Sparrow came in. The bird looked like a miniaure Bald Eagle. We trapped the sparrow and examined it in hand. It went through a spring molt, changing from dirty white to glistening white on the head. The rest of the plumage looked normal. I suspect that the freaks showing albino tendencies probably have a poor survival rate. Lacking good camouflage, they are conspicuous to predators.--ROBERT P. TEULINGS, Route 2, Chapel Hill, N.C. 27514

Albinism as Viewed by South Carolina's Poet Laureate

"Dangerous Beauty" Archibald Rutledge calls albinism in *Nature Magazine* (December 1938), expressing the view that albinism handicaps life in the wild. "These are nature's albinos, made spectrally beautiful by the absence of pigments. Anything living may be albino, whether on land, in the air, in the water and, of course, humans."

Avian albinos seen by Dr. Rutledge include a Cooper's Hawk, a Red-tailed Hawk, a Ruffed Grouse, and a hen quail ("a true princess of the wild--an exquisite albino"). Dr. Rutledge continues, "The field sparrow seems to have a tendency in this direction with all variations as to colors and degree of coloration in plumage. I have three mounted

specimens of the white English sparrow. They are very different in the shade of color that their plumage displays. One is literally snowy; one is dusky white; and the third is a delicate cream color."



Spring Meeting Held at Southern Pines

On 1-3 May 1970 the annual spring meeting of the Carolina Bird Club was held at Southern Pines, N.C. Headquarters was the new interpretive center of the Weymouth Woods Sandhills Nature Preserve. The Friday night meeting centered around a slide program given by Weymouth Woods Ranger-Naturalist L.M. Goodwin Jr. on flowers, animals, and birds found in the Sandhills area.

On the Saturday field trips, 98 CBC members compiled a list of 100 species of birds, including 22 species of warblers. Field trips were led inside the Weymouth Woods Preserve by L.M. Goodwin Jr. and James F. Parnell, to Whispering Pines and Little River by Robert and Elizabeth Teulings, and to Drowning Creek and the Sandhills Wildlife Management Area by J.H. Carter III. Swainson's Warblers were heard at Drowning Creek, and they were both heard and seen at Little River. Red Crossbills were recorded at Weymouth Woods, and nearly everyone saw Red-cockaded Woodpeckers.

Friday night and all day Saturday, bird artist Doug Pratt had a number of his excellent paintings and drawings on display in the Weymouth Woods Library. At the Saturday night meeting a slide program on the new Raven Rock State Park was given by Robert Soots of Campbell College. His beautiful slides depicted many of the plants and wildflowers that grow at Raven Rock. At the end of the meeting, the new slate of CBC officers was presented and elected. Evelyn Dabbs of Sumter, S.C., succeeded Robert Teulings as President of CBC. (I know all of us join in wishing Mrs. Dabbs a successful and rewarding term in office, and in congratulating Bob Teulings on the wonderful job he did as president.)

Sunday's feature was a field trip to Raven Rock State Park led by Dr. Soots. The beautiful scenery, especially at the cliffs along the Cape Fear River, included numerous interesting plants and flowers such as Mountain Laurel and Rhododendron. The Buies Creek Bird Club served an excellent picnic lunch to the hungry birders along the bank of a rock-strewn stream. The setting brought to mind similar scenes in the North Carolina mountains. CBC again expresses its sincere appreciation for the thoughtfulness of the Buies Creek Bird Club.--J.H. CARTER III, P. O. Box 891, Southern Pines, N.C. 28387

[illegible]

SPRING BIRD COUNT-1970	COAST			COASTAL PLAIN					PIEDMONT										MTN.				
	Morehead City, N.C. 25 April	Wilmington, N.C. 25 April	Charleston, S.C. 2 May	Beaufort Co., N.C. 10 May	Pamlico Co., N.C. 3 May	Rocky Mount, N.C. 10 May	Fayetteville, N.C. 5 May	Southern Pines, N.C. 28 April	Dillon, S.C. 26 April	Henderson, N.C. 2 May	Raleigh, N.C. 9 May	Chapel Hill, N.C. 26 April	Greensboro, N.C. 9 May	Winston-Salem, N.C. 3 May	Stanly Co., N.C. 2 May	Charlotte, N.C. 9 May	Greenville, S.C. 2 May	Piedmont, S.C. 4 May	Anderson, S.C. 6 May	Caldwell Co., N.C. 25 April	Ashe Co., N.C. 8 May	Buncombe Co., N.C. 9 May	
Individual Totals	4	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Western Sandpiper	7	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Marbled Godwit	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sanderling	554	105	27	---	---	---	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
American Avocet	3	---	---	---	---	---	---	---	---	---	*	---	---	---	---	---	---	---	---	---	---	---	---
Northern Phalarope	*	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Great Black-backed Gull	4	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Herring Gull	1024	439	24	---	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Ring-billed Gull	942	263	20	17	34	---	---	*	---	35	---	---	13	1	12	---	---	---	---	---	---	---	---
Laughing Gull	1630	1058	46	27	326	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Bonaparte's Gull	11	4	7	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Gull-billed Tern	171	92	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Forster's Tern	5	*	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Common Tern	538	462	76	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Least Tern	634	323	6	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Royal Tern	556	300	246	3	5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sandwich Tern	18	---	---	---	---	---	---	---	---	---	*	---	---	---	---	---	---	---	---	---	---	---	---
Caspian Tern	17	5	5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Black Skimmer	459	248	199	12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Rock Dove	1190	153	299	48	12	43	23	---	7	34	197	26	117	65	58	33	24	11	18	15	7	---	
Mourning Dove	1878	109	43	59	45	18	170	22	76	22	310	134	277	104	170	76	14	32	21	16	3	45	
Ground Dove	5	1	3	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Yellow-billed Cuckoo	77	1	2	34	1	1	1	*	1	1	8	1	12	2	6	---	1	1	2	1	---	---	
Black-billed Cuckoo	6	---	---	---	---	---	---	---	---	---	---	*	---	---	---	1	*	---	---	---	---	---	---
Barn Owl	*	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Screech Owl	9	---	---	---	---	---	---	---	---	---	3	1	---	1	2	2	---	---	*	---	---	---	---
Great Horned Owl	11	1	3	---	---	---	3	---	---	---	2	7	1	---	---	1	---	---	---	---	---	---	---
Barred Owl	35	2	11	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Short-eared Owl	1	1	---	---	---	---	---	---	---	---	6	*	---	---	---	---	3	1	7	3	---	---	---
Chuck-will's-widow	124	51	28	13	2	---	9	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Whip-poor-will	79	1	---	---	---	---	---	3	---	---	19	25	2	5	16	2	---	---	*	---	---	---	---
Common Nighthawk	74	9	---	---	---	1	1	2	---	---	10	4	16	2	1	5	1	4	*	---	---	---	---
Chimney Swift	1067	142	9	70	55	23	27	37	39	10	156	86	70	42	59	68	8	18	68	15	3	15	---
Ruby-th. Hummingbird	119	4	7	24	---	---	2	3	---	1	20	23	11	8	5	3	1	1	1	3	1	*	---
Belted Kingfisher	74	9	6	3	2	1	---	3	---	2	2	2	13	6	8	3	---	---	---	---	---	---	---
Yellow-shafted Flicker	516	35	42	13	29	15	5	6	5	15	57	43	74	71	38	7	9	4	2	9	6	15	---
Pileated Woodpecker	73	2	10	28	4	8	1	2	*	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Red-bellied Woodpecker	514	14	57	48	18	3	12	11	3	15	67	67	84	41	36	16	2	7	8	1	1	1	---
Red-headed Woodpecker	180	13	31	10	27	6	7	7	---	---	17	12	28	13	1	2	2	1	---	---	---	---	---
Yellow-bellied Sapsucker	16	1	---	---	---	---	---	1	---	---	1	---	---	---	4	6	---	---	---	---	---	---	*

Hairy Woodpecker	47	1	5	1	---	2	2	9	7	3	1	4	10	8	1	5	3	1	2	1	1	1	*
Downy Woodpecker	---	5	5	2	2	2	2	9	7	3	2	20	43	27	11	21	21	3	2	1	3	4	1
Red-cockaded Woodpecker	---	2	4	14	3	---	---	1	2	---	---	---	---	---	---	---	---	---	---	---	---	---	1
Eastern Kingbird	26	23	20	17	32	14	7	29	3	25	10	44	19	35	13	29	9	3	5	12	1	5	8
Great Crested Flycatcher	---	29	45	145	30	17	2	38	7	7	14	29	15	60	21	14	19	5	14	6	2	6	6
Eastern Phoebe	128	6	---	---	1	---	4	2	1	---	6	13	14	23	13	9	11	2	3	10	1	8	1
Yellow-bellied Flycatcher	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---
Acadian Flycatcher	196	11	4	42	8	5	1	4	4	1	4	24	22	33	13	1	15	---	---	4	---	---	---
Trail's Flycatcher	*	---	---	---	---	---	---	---	---	---	---	---	---	---	*	---	---	---	---	---	---	---	---
Least Flycatcher	---	---	---	---	---	---	---	---	---	---	---	1	---	---	1	1	---	1	---	---	---	---	---
Eastern Wood Pewee	288	14	5	36	22	14	3	10	4	---	18	29	16	51	16	18	11	1	4	5	1	4	6
Horned Lark	---	---	---	---	---	7	---	---	1	---	---	---	---	13	15	---	---	1	4	---	---	---	---
Tree Swallow	482	71	59	188	12	47	2	2	3	---	7	86	5	---	---	---	---	---	---	---	---	---	---
Bank Swallow	16	---	2	---	---	---	---	---	4	---	4	---	---	---	---	---	---	---	---	---	---	---	---
Rough-winged Swallow	274	24	8	2	2	2	3	10	2	---	4	27	40	14	43	9	5	6	35	18	11	8	9
Barn Swallow	1651	245	317	39	38	62	34	8	12	---	33	174	111	108	41	315	12	6	30	45	8	3	10
Cliff Swallow	147	---	---	---	---	---	---	---	---	---	---	---	---	---	1	102	2	---	---	35	---	---	---
Purple Martin	1060	64	58	66	129	46	9	38	2	2	---	67	23	95	202	189	10	12	2	42	2	2	---
Blue Jay	---	79	205	49	62	27	30	64	43	40	60	169	116	247	74	160	101	12	42	21	36	8	34
Common Crow	913	67	25	60	10	18	18	31	2	13	15	70	100	93	96	163	30	20	21	18	5	12	26
Fish Crow	271	92	84	26	40	2	---	---	---	---	24	---	---	---	---	---	3	---	---	---	---	---	---
Carolina Chickadee	664	37	23	23	23	6	3	23	7	21	5	93	76	92	57	57	35	4	17	12	20	12	9
Carolina Titmouse	626	21	45	81	21	24	8	32	9	11	13	70	60	67	51	50	17	2	4	4	12	11	13
Tufted Titmouse	---	---	---	---	---	---	---	---	*	---	5	24	22	18	12	---	---	---	---	---	---	---	---
White-breasted Nuthatch	88	---	1	1	3	---	1	---	---	---	2	1	4	1	1	4	---	2	---	---	---	---	1
Red-breasted Nuthatch	22	2	---	---	---	---	---	---	2	2	---	---	---	---	---	---	---	---	---	---	---	---	---
Brown-headed Nuthatch	200	9	22	23	8	---	---	20	7	---	5	18	16	21	7	17	11	---	10	6	---	---	---
Brown Creeper	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
House Wren	70	---	1	---	---	1	---	---	---	---	2	7	10	16	8	15	3	1	---	---	2	3	2
Winter Wren	*	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Carolina Wren	640	48	47	92	11	6	14	22	3	22	5	62	69	80	31	41	14	4	27	13	14	5	10
Long-billed Marsh Wren	22	5	9	5	---	---	---	---	---	---	---	---	---	---	*	---	---	---	---	---	---	---	---
Short-billed Marsh Wren	12	7	2	3	---	---	---	---	1	---	---	2	---	---	---	---	---	---	---	---	---	---	---
Mockingbird	1850	108	174	26	45	39	16	92	28	64	82	155	113	246	157	223	135	28	30	64	12	---	13
Catbird	529	8	32	1	6	3	5	41	13	12	8	79	33	76	93	40	18	16	7	12	10	7	9
Brown Thrasher	802	75	64	12	30	9	14	41	5	57	37	54	41	125	46	102	29	10	20	8	5	10	10
Robin	1627	10	39	20	20	1	17	80	40	68	88	196	164	251	214	124	82	34	6	26	48	7	112
Wood Thrush	892	3	31	12	9	2	18	47	7	12	31	107	95	209	56	153	49	6	6	15	14	3	7
Hermit Thrush	---	*	---	---	---	---	---	---	---	---	---	---	---	---	2	2	---	---	1	1	---	---	---
Swainson's Thrush	---	---	---	1	---	---	---	---	1	---	7	3	66	27	---	---	2	1	1	---	---	---	---
Gray-cheeked Thrush	---	---	---	---	---	---	1	1	---	---	---	1	---	1	2	---	---	---	---	---	---	---	---
Veery	25	---	1	1	---	---	1	2	2	---	2	6	2	3	4	---	---	---	---	---	---	---	---
Eastern Bluebird	351	9	3	10	5	3	8	6	7	2	4	16	50	31	13	121	13	8	20	8	4	3	7
Blue-gray Gnatcatcher	337	8	6	68	6	2	1	13	8	2	---	54	69	30	18	19	20	---	8	4	---	---	---
Golden-crowned Kinglet	---	---	---	---	---	---	---	---	---	---	---	---	---	2	---	---	---	---	---	---	---	---	---
Ruby-crowned Kinglet	20	*	4	---	---	---	---	---	---	3	1	---	*	7	4	1	---	---	---	*	---	---	---
Water Pipit	---	---	---	---	---	---	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Cedar Waxwing	550	26	114	---	---	---	7	---	15	2	30	47	25	64	79	41	38	---	47	15	---	---	---
Loggerhead Shrike	163	1	1	3	2	1	11	14	4	4	9	16	1	22	1	49	6	4	8	6*	---	---	---
Starling	5894	425	545	14	156	163	350	174	53	134	109	474	104	573	375	399	332	56	869	450	20	25	94
White-eyed Vireo	311	6	29	142	4	14	2	6	4	3	2	23	30	6	5	16	6	2	7	3	---	---	---
Yellow-throated Vireo	---	2	3	15	4	2	1	5	4	*	---	24	18	23	14	3	1	---	1	---	---	---	---

SPRING BIRD COUNT--1970	COAST			COASTAL PLAIN					PIEDMONT										MTN.				
	Morehead City, N.C. 25 April	Wilmington, N.C. 25 April	Charleston, S.C. 2 May	Beaufort Co., N.C. 10 May	Pamlico Co., N.C. 3 May	Rocky Mount, N.C. 10 May	Fayetteville, N.C. 5 May	Southern Pines, N.C. 28 April	Dillon, S.C. 26 April	Henderson, N.C. 9 May	Raleigh, N.C. 9 May	Chapel Hill, N.C. 26 April	Greensboro, N.C. 9 May	Winston-Salem, N.C. 3 May	Stanly Co., N.C. 2 May	Charlotte, N.C. 9 May	Greenville, S.C. 2 May	Piedmont, S.C. 4 May		Anderson, S.C. 6 May	Caldwell Co., N.C. 25 April	Ashe Co., N.C. 8 May	Buncombe Co., N.C. 9 May
Individual Totals																							
Solitary Vireo	14	15	98	15	14	18	81	11	3	32	159	112	103	42	72	58	3	11	9	5	7	6	3
Red-eyed Vireo	895										*												
Warbling Vireo	4	21									1												
Black-and-white Warbler	96																						
Prothonotary Warbler	122	12	27	2	4	2	5	7	13		7	11		7	5	7		4	2	5	1	3	
Swainson's Warbler	5	2												2									
Worm-eating Warbler	19	9	1					1			1	4		1									
Golden-winged Warbler	4										*												
Blue-winged Warbler	11							2			*	6	1	*									
Blue-winged Warbler																							
Brewster's W. (hybrid)	1																						
Tennessee Warbler	1																						
Parula Warbler	560	22	233	11	7	1	19	4	6	16	44	46	12	2	1	2		2					
Yellow Warbler	115	11	2	1			3			23	23	8	25	23	1	1	2		3	3			
Magnolia Warbler	12							1		1			2	3									
Cape May Warbler	36		*					*			*	11	10	8	1	3			*	1			
Black-th. Blue Warbler	112	3					2	9			33	29	11	14	1	1	1					3	2
Myrtle Warbler	632	261	97	1	4	1	3	12	28	16	16	90	27	35	14			15	12				
Black-th. Green Warbler	40	1	30		4			1			*		1	*			1				1		1
Cerulean Warbler	*																						
Blackburnian Warbler	1										*		1	*									
Yellow-throated Warbler	245	14	49	3	5	6		7	1	2	19	13	1	7	2							2	
Chestnut-sided Warbler	26							1		2	*	3	7	2					*	2	4	5	
Bay-breasted Warbler	4											1	2	1									
Blackpoll Warbler	86	1		4		1	5			5	17		15	13	2	16		1	6				
Pine Warbler	257	9	54	6	2	2	13	4	*	5	22	14	5	7	5	12	1	3	2				
Prairie Warbler	331	109	18	13	18	14	14	3	2	7	19	26	4	2	30	7	2						
Palm Warbler	4	1											2	*				1	*				
Ovenbird	169	5	1	1	1	1	1	12		9	46	17	42	18				2	3	2		7	
Northern Waterthrush	28							1			6	16	3	*									
Louisiana Waterthrush	32				1	1	1	3	*		12	9	1		1	1			2			1	1
Kentucky Warbler	55	1	7			1	1	4		3	9	17	3	3	2	3							
Mourning Warbler	1																						
Yellowthroat	460	12	15	16	29		35	7	2		89	58	78	13	30	4	3	16	11	1	2	2	2
Yellow-breasted Chat	222	2	6	42	5	3	10	1		6	24	51	43	11	4	18	2	4	6		3	4	
Hooded Warbler	302	3	17	2	15		5	7	6	1	51	23	8	6	2	16		1	2	1	1	3	3
Wilson's Warbler	2	1									*		1										
Canada Warbler	4												1										2
American Redstart	214	1				1	24	8	1		65	35	34	10	5	25	2	1	2				
House Sparrow	4282	222	323	235	301	420	148	105	156	68	314	55	506	73	654	130	15	110	321	55	20	33	

Bobolink	750	---	69	2	16	---	---	---	51	6	15	263	---	123	---	122	58	*	40	50
Eastern Meadowlark	1634	147	18	19	30	64	47	---	51	6	15	19	200	120	164	107	93	21	90	120
Red-winged Blackbird	3346	288	482	137	24	174	190	---	74	7	54	20	266	137	402	178	127	6	225	243
Orchard Oriole	268	17	20	38	18	6	16	---	15	3	4	---	15	4	41	2	13	13	40	2
Baltimore Oriole	41	6	2	1	1	---	---	---	2	1	1	1	2	2	15	*	3	1	---	---
Rusty Blackbird	30	2	1	---	---	---	5	---	---	1	---	---	1	2	---	---	---	16	---	---
Boat-tailed Grackle	521	178	305	38	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Common Grackle	3970	119	118	71	193	206	13	124	40	87	---	98	308	196	739	360	518	173	50	350
Brown-headed Cowbird	599	12	33	11	2	4	3	14	6	3	3	24	30	30	48	41	104	16	13	36
Scarlet Tanager	106	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Summer Tanager	317	3	17	60	20	8	4	18	4	2	2	19	29	29	11	17	9	3	1	2
Cardinal	2661	155	238	149	73	132	17	118	40	61	14	10	32	26	29	10	36	13	2	4
Rose-breasted Grosbeak	28	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Blue Grosbeak	207	*	7	1	13	3	3	24	1	3	3	---	5	5	3	5	3	1	11	28
Indigo Bunting	497	12	11	25	50	52	11	18	1	*	---	---	---	---	---	---	---	---	---	---
Painted Bunting	107	19	31	57	---	---	---	---	---	---	---	10	48	23	69	17	41	40	10	18
Dickcissel	1	---	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Evening Grosbeak	370	168	6	---	---	---	3	3	28	---	---	4	8	127	---	13	6	---	---	2
Purple Finch	16	---	---	---	---	---	---	---	*	---	---	---	---	2	---	4	5	---	---	*
Pine Siskin	359	12	1	---	---	---	---	55	71	---	---	2	91	38	---	44	6	---	---	32
American Goldfinch	768	24	19	1	2	9	46	23	*	---	---	26	84	37	204	69	121	35	6	11
Red Crossbill	12	---	---	---	---	---	---	---	5	---	---	3	4	---	---	---	---	---	---	23
Rufous-sided Towhee	1204	66	92	69	24	18	12	43	10	18	---	17	141	97	179	127	70	73	13	35
Savannah Sparrow	306	147	61	9	---	2	---	2	3	---	---	---	36	44	1	---	---	4	2	6
Grasshopper Sparrow	33	---	---	---	---	---	---	---	---	---	---	---	3	1	10	---	---	---	---	7
Sharp-tailed Sparrow	8	5	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Seaside Sparrow	105	86	19	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Vesper Sparrow	2	---	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Bachman's Sparrow	5	---	1	2	---	---	1	---	---	---	---	---	---	---	1	---	---	---	---	1
Slate-colored Junco	26	---	1	---	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	15
Chipping Sparrow	560	6	11	2	21	7	2	4	3	20	---	21	24	107	69	65	133	20	5	18
Field Sparrow	503	10	3	---	1	5	3	1	3	2	---	4	27	66	41	26	105	17	7	18
White-crowned Sparrow	8	---	---	---	---	---	---	---	---	---	---	---	---	---	1	*	5	---	---	6
White-throated Sparrow	729	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	5
Fox Sparrow	5	21	102	2	1	---	---	12	36	36	---	12	32	262	22	66	72	17	10	25
Swamp Sparrow	28	2	8	1	---	4	---	---	1	3	---	---	*	6	2	2	---	---	---	2
Song Sparrow	213	1	1	4	1	---	---	---	---	---	---	---	---	3	60	61	1	14	5	1
Total Number Species	254*	174	171	139	84	82	85	102	107	57	---	69	127	123*	136	124	117	104	73	83
Total Number Individuals	74,723	11,125	9,557	4,059	1,911	2,223	1,731	2,208	981	1,224	---	1,264	6,162	4,541	7,303	4,175	6,544	2,490	563	2,490
Field Observers	252	16	17	12	8	5	6	12	1	2	---	16	18	25	29	26	15	17	6	3
Yard Observers	87	1	2	0	5	0	2	2	4	0	---	---	12	8	1	0	44	1	0	0
Field Parties	91+	8	6	5	3	2	2	5	1	1	---	---	9	9	9	10	6	6	2	4
Party-hours	836+	65	64	46	26	24	23	41	16	12	---	---	97	121	94	85	---	42	25	22
Party-miles	3534+	236	342	199	115	109	118	217	119	46	---	---	267	188	344	256	173	210	60	178

*Seen in count area during count period but not on count day.

* Plus one hybrid

SPRING BIRD COUNT—1970

ELOISE F. POTTER

With a total of 254 species plus one hybrid warbler, the 1970 Spring Count set a new record for the Carolinas. The previous high was 246 species tallied in 1965. Morehead City led with 174 species, followed by the other two coastal count areas, Wilmington (171) and Charleston (139). High inland count area was Greensboro with 136 species. Morehead also recorded the largest number of individual birds (11,125), followed by Wilmington, Greensboro, Stanly County, and Raleigh.

The highly successful spring count seems to be the result of thorough coverage and generally favorable weather conditions. Only the Brewster's Warbler at Chapel Hill and the Cinnamon Teal at Morehead City can be considered big surprises on the species list. The Cinnamon Teal seen by Eugene Pond constitutes the third acceptable sight record of the species for North Carolina. For details of these and other unusual sight records, see the compilers' comments.

COMPILERS' COMMENTS

MOREHEAD CITY, N.C.: Yellow Rails (WH) were at Huntley's impoundment. Stilt Sandpipers (TLQ, BS, RW) were at North River Marsh. The Ground Dove (JF III) was one of a pair that has been present at Ft. Macon since 14 November 1969. Short-eared Owl (MB, DM) was flying across Hwy 70 NW of Morehead City. Wilson's Warbler (TLQ, BS, RW) was at Lennoxville Point. The male Cinnamon Teal (EP) was at Huntley's Impoundment. It was associating with a female teal that may have been of the same species. NOTE: The center of the count area has been moved to a point 1 mile NW of Phillips Island in lower Newport River.--John O. Fussell III

WILMINGTON, N.C.: American Avocet (E&H LeGrand) was in Cape Fear River near Carolina Beach. Dickcissel (PM) was in Wilmington.--Dot Earle

CHARLESTON, S.C.: The counts for such species as the Great Crested Flycatcher, White-eyed Vireo, Parula Warbler, Yellow-throated Warbler, Prairie Warbler, Hooded Warbler, and Cardinal seem significantly higher in comparison to last year.--Julian R. Harrison

ROCKY MOUNT, N.C.: Evening Grosbeaks are late in leaving this year. The majority left on 30 April, but three females were still at a feeder on count day, 10 May.--John Thompson

SOUTHERN PINES, N.C.: Long-billed Marsh Wrenn (JHC III) represents first definite record for the area.--J.H. Carter III

RALEIGH, N.C.: Transient warblers, except Black-throated Blue, were surprisingly scarce. Warbling Vireo (GT, BD) was studied carefully at 10 feet. Least Flycatcher (JAL) was seen and heard at Lake Raleigh. Turkey (EL) and Red Crossbills (HL) were at Umstead State Park. NOTE: New count area center is at Norfolk and Southern RR crossing on Lake Wheeler Road.--Harry E. LeGrand Jr.

CHAPEL HILL, N.C.: Brewster's Warbler was found morning of 26 April by Oliver Ferguson, and it remained in the same location rest of day. Identification verified by J.O. Pullman and others.--R.P. Teulings

GREENSBORO, N.C.: Wilson's Warbler (LC, TS, FF).--Charlotte Dawley

WINSTON-SALEM, N.C.: Yellow-bellied Flycatcher (CRH) was singing. Two Swainson's Warblers (RS, RH et al.) were in same area as last year. Prothonotary Warblers (CF, RW)

appear to be established in several areas in county. Warbling Vireo (HM, GG et al.) was seen and heard at close range.--C. Royce Hough

STANLY COUNTY, N.C.: Eastern Bluebirds show a continued increase as more nesting boxes are being erected. Cliff Swallows nesting under High Rock bridge for third year are being threatened by House Sparrows!--Mrs. Barrett Crook

CHARLOTTE, N.C.: Migrants very scarce. Pine Siskin (HDP) was quite late. The four Cattle Egrets (HDP) were a Mecklenburg County first, but had been seen on previous count in York County, S.C., portion of court area.--H. Douglas Pratt

GREENVILLE, S.C.: On 4 May five Barn Owls were found in a seed cleaning barn and approximately 100 Bobolinks were also in our area.--Rosa Lee Hart

PIEDMONT, S.C.: Orchard Orioles extremely abundant. --Carl R. Garrison

ANDERSON, S.C.: Most transients and winter residents had departed. The 22 Lesser Yellowlegs were in one flock at 18 mile swamp (Hartwell backwater).--Adair M. Tedards

ASHE COUNTY, N.C.: The count was made about 6 miles SE of West Jefferson in the Pisgah Heights and Methodist Camp area along the South Fork of New River. Elevation is 3,300 to 3,800 feet.--Beulah R. Kiser

OBSERVERS

MOREHEAD CITY, N.C.: Mike Browne, Frank Chapman, John Fussell II, John Fussell III, Donna Goodwin, Gilbert Grant, R.J. Hader, Will Hon, Charles Lincoln, Darryl Moffett, Donald Patterson, Eugene Pond, T.L. Quay, Flora Rhodes, Mary Simpson, Bob Soots, Ray Winstead.--John O. Fussell III, Box 520, Morehead City, N.C.

WILMINGTON, N.C.: Katharine Alexander, Joyce Bennett, John Butler, Duane Carmony, Jay Carter, Dot Earle, Bill Greene, Kitty Kosh, Edmund LeGrand, Harry LeGrand, Billy McEachern, Polly Mebane, Frances Needham, Carl and Mary Newhouse, James Parnell, Mary Urich.--Dot Earle, 428 Causeway Drive, Wilmington, N.C. 28401

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CHARLOTTE, N.C.: Mrs. M.J. Barber, Jimmy Bookout, Mrs. E.O. Clarkson, Bill Cobey, Flody Cobey, Adrian Dykema, Beth Dykema, Irene Kittinger, John R. Musser, Rebecca Norwood, Mrs. George Potter, H. Douglas Pratt, Oren Rhyne, Tommy Rhyne, William Sayward, Bill Smith, Ann Wilcher, Mrs. Ray Wilson.--H. Douglas Pratt, Route 3, Box 113L, Charlotte, N.C. 28210

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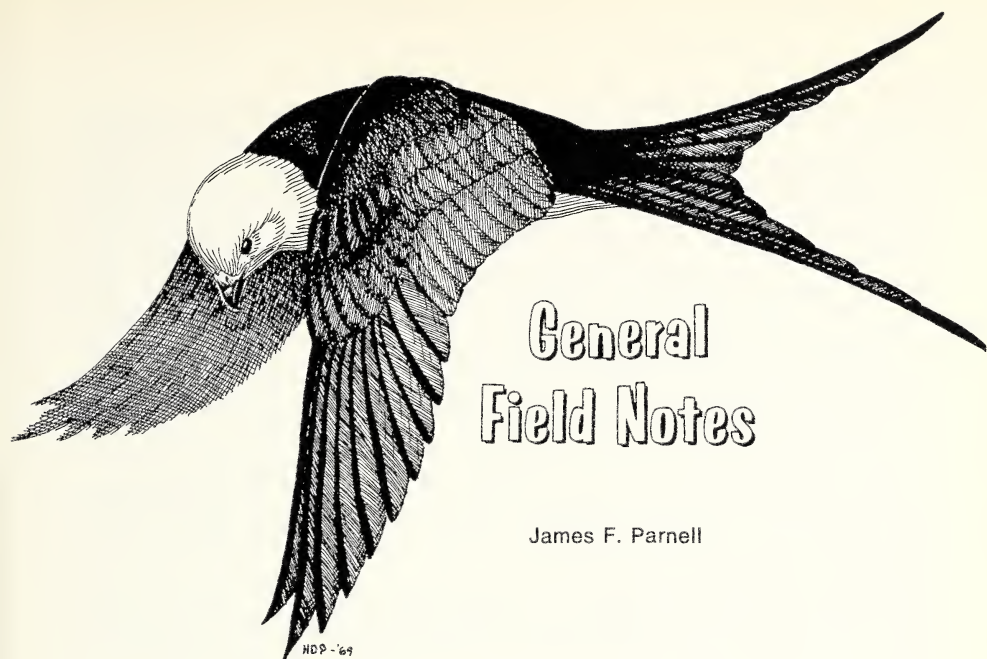
PIEDMONT, S.C.: Michael S. Anderson, Carl R. Garrison, Adair M. Tedards.--Carl R. Garrison, RFD 4, Box 228, Easley, S.C. 29640

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ASHE COUNTY, N.C.: Thomas Jones, Beulah Kiser, David Kiser, Hazel Koontz, Mike Koontz, Elam Kurtz, Mrs. J. D. Lafferty, Tim Lafferty, Beulah Orsborne.--Beulah R. Kiser, Box 312, West Jefferson, N.C. 28694

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General Field Notes

James F. Parnell

Destruction of the Rich's Inlet, N.C., Heronry

GILBERT S. GRANT

Route 1, Box 363, Sneads Ferry, N.C.

21 May 1970

The Rich's Inlet heron colony is located about 3 miles SE of Hampstead in Pender County, N.C., and is described by Funderburg (*Chat*, 23:17-18, 1960).

This was a formerly productive colony. Funderburg and Quay (*Jour. Elisha Mitchell Sci. Soc.*, 75:13-18, 1959) found 17 Green Heron (*Butorides virescens*) nests, 40 Little Blue Heron (*Florida caerulea*) nests, 105 Common Egret (*Casmerodius albus*) nests, 132 Snowy Egret (*Leucophoyx thula*) nests, and 198 Louisiana Heron (*Hydranassa tricolor*) nests there in 1955. Funderburg (*Chat*, 23:17-18, 1960) found an average of 20 pairs of Green Herons, 35 pairs of Little Blue Herons, 50 pairs of Common Egrets, 125 pairs of Snowy Egrets, and 150 pairs of Louisiana Herons in this heronry.

Jack Dermid, James F. Parnell, and I visited the colony on 4 July 1969. We found about 25 pairs of Green Herons nesting in this once-thriving colony. No other species of long-legged waders were observed in the vicinity. A summer home had been built adjacent to the nesting area and a path had been cut through the site.

Similar destruction of other colonies can be prevented if annual surveys are conducted and conservation groups are kept abreast of developments that may cause harmful changes in the habitat.

Goshawk at Franklin, N.C.

MARY ENLOE

Route 1, Box 193

Franklin, N.C. 28734

Following low temperatures during most all of January and February (zero on 5 January), four snows piled up on each preceding one and kept a blanket of snow on the

north side of the house until after 10 March. During this period a Goshawk came into the yard.

I was standing by the kitchen window at 5 PM on 2 March 1969 when a large gray-backed hawk with a long tail darted into the dense, thorny eleagnus shrub--about 8 feet from where I stood. After a moment or two it came out and stood in an open area, roughly 4 by 4 feet, from which snow had been cleared to give the grain-eating birds a place to feed. It faced me for only a minute or so, then flew around the corner of the house in the direction from which it came. As it turned the corner I noted the long grayish, rounded tail with narrow white edge, and the muted darker bands which would not have been distinct at a much greater distance.

As it stood facing me I realized it was a hawk I was not familiar with, so I took note of all the details I could for there was not time to reach for binoculars. None were needed since it was less than 8 feet from me when it stood facing me. It had white underparts with no markings; fierce, baleful orange eyes; and a round, flat black cap on top of its head. I was impressed by the bright yellow, powerful looking feet and legs. The legs were longer and stronger looking than any hawk I know, and it had equally big, strong looking feet. It was the personality of the bird that made it so different from all other hawks of my acquaintance. It stood tall and fearless, glaring fiercely toward the house, completely master of all it surveyed.

I have had Red-tailed and Red-shouldered Hawks in my yard (and dead ones have been brought to me for identification) but this hawk was definitely much larger and fiercer looking than any of them. Numerous Sharp-shinned and Cooper's Hawks have been in the same shrub, both male and female, so that I have some basis for comparison. Crows have also been in my yard, but this hawk was almost twice the size of a crow. After carefully checking hawks in bird guides, I was convinced that I had seen a Goshawk.

[The account above appears to be the first published record of this northern hawk in North Carolina. The species will now be placed on the hypothetical list, awaiting the confirmation of additional records. Most southern occurrences of the Goshawk are during periods of severe winter weather.--DEPT. ED.]

Nesting of the Osprey Near Georgetown, S.C.

THEODORE A. BECKETT III
Magnolia Gardens and Nurseries
Route 4, Charleston, S.C.

1 March 1970

For several years S.C. Langston and I have, in conjunction with our Bald Eagle studies, checked the large colony of Ospreys (*Pandion haliaetus*) on the Santee Club near Georgetown, S.C. as well as a few scattered nests in surrounding areas.

An exact picture of breeding success in the Santee area is impossible as some areas are inaccessible. We do know that this club contains what is probably the largest colony in South Carolina. All nests are strictly protected by Mr. Cody, the club manager. It is also known that the nesting area is relatively free from any direct application of pesticides. This does not, however, apply to the feeding habitat.

The backwater at the club has a very long history and is recorded in the ornithological literature for its colonies of White Ibis, herons, egrets, and Anhingas. It is quite possible that the Osprey used the site even before the above mentioned species. Nearly all nests are located in cypress trees growing in water between 3 and 10 feet in depth. It is probable that predation is minor. Fish Crows are present but no case of actual predation has been noted.

A total of about 60 nest structures were found in 1969 but only 25 to 30 pairs of birds were present. Single birds did not seem to use the site for loafing. The Great

Horned Owl does compete for nesting sites. Even in these cases the owls fledge about mid-March, and the nests may then be used by the Ospreys.

An attempt to check on clutch size was made in 1969 using a mirror and aluminum conduit pipe. Unstable boats, however, made this process unsatisfactory for detailed counts. The usual clutch was two or three eggs. It was noted that eggs seemed to disappear from the nests late in the incubation period. Based on our experience with other birds, thin shells were suspected. This factor has been observed in the Charleston area in the Bald Eagle, the Black Skimmer, the Gull-billed Tern, the Barn Owl, and the Brown Pelican.

From about 35 active nests there were only three known fledglings. Very rough conditions around some nests made a complete check impossible, but numbers of fledglings were obviously very low. This indicates that the Osprey in the Santee area is in serious danger and may not be able to sustain itself in the local breeding colonies.

Summer Records of the Raven in Oconee County, S.C.

MARCUS B. SIMPSON JR.
P. O. Box 167, Statesville, N.C.

25 May 1970

Sprunt and Chamberlain (*South Carolina Bird Life*, 1948) state that the Raven (*Corvus corax*) is known as a rare permanent resident in Oconee County, but their most recent sightings from this area were of a single bird in March 1935 and of 3 individuals in 1936. Furthermore, a check through volumes 1-33 of *The Chat* reveals no additional observations from this region.

On 12 June 1969 I noted a total of 6 Ravens near the Walhalla Fish Hatchery in Oconee County, S.C. The birds were seen and heard along Route 107 and the Fish Hatchery access road at elevations ranging from 2,600 to 3,000 feet. The main attraction for these birds appears to be the recently constructed garbage dump on Burrell's Mountain, about 100 yards W of Route 107 along Chattooga Ridge (3,000 feet). This open dump is utilized by the Forest Service for disposal of picnic ground wastes and by the Fish Hatchery for removal of dead trout. The Ravens have quickly learned of the feast to be had. Laurie W. Smith of the US Fish and Wildlife Service informed me that at least one pair of Ravens have been present in the area each season for the past 30 years, but the creation of the dump some 5 years ago resulted in a marked increase in the local population of the species. Smith reports seeing as many as 15 Ravens around the dump at one time, although smaller flocks are the usual rule. The species has been rumored to nest in the mountains of nearby Macon and Jackson Counties in North Carolina; and it seems likely that some of these birds are among those attracted to the Fish Hatchery area. On subsequent trips to this region, I noted 8 birds on 17 June, 4 on 18 June, 6 on 21 June, and 9 on 25 June.

Red Crossbills and Pine Siskins In Great Smoky Mountains, Summer 1969

DOUGLAS PRATT
Route 3, Box 113L, Charlotte, N.C. 28210

Two finches that are generally regarded as being of erratic and unpredictable occurrence in the Great Smoky Mountains are the Pine Siskin (*Spinus pinus*) and the Red Crossbill (*Loxia curvirostra*). During the summer of 1969 I had the opportunity to observe these birds on numerous occasions. Based on information given in *Notes on the Birds of Great Smoky Mountains National Park and Vicinity* (Stupka, 1963) I feel that the following observations are noteworthy.

During the month of June, large flocks of siskins were seen on every visit I made to the Forney Ridge-Newfound Gap area. June is ordinarily a month with infrequent records for this species. Red Crossbills were also common and easily seen during this same month. The total population of siskins I would estimate to be in the thousands, that of the crossbills in the hundreds for this particular area.

Both of these species remained present through August, the siskins becoming less numerous as the summer progressed, the crossbills seeming to increase. All records for these species were taken in the spruce-fir biome of the park with the one exception noted below. It should also be noted that these birds were absent from the Balsam range which has extensive growth of spruce and fir. All the above records exceeded 5,000 feet in altitude.

On 21 August, while driving across the park on Hwy 441, I noted a small flock of Red Crossbills in a hemlock grove near "the loop" on the Tennessee slope. The elevation there is 3,500 feet. A fresh road kill of a female was found at the site. This was the lowest altitude at which I observed the species during the summer.

Low Altitude Summer Record of the Slate-colored Junco

DOUGLAS PRATT

Route 3, Box 113L, Charlotte, N.C. 28210

26 December 1969

I observed a Slate-colored Junco (*Junco hyemalis*) near the town of Ela in Swain County, N.C., on 13 June 1969. This locality is at approximately 2,000 feet elevation. According to Stupka (*Birds of the Great Smoky Mountains National Park*, 1963) this species is usually confined to altitudes above 3,000 feet during the breeding season. Indeed, he points out that the birds are not found below 3,200 feet in the drainage of the Oconaluftee River. The Ela locality is within that drainage. This record thus constitutes an unusual and presumably abnormal occurrence of this species.

Behavior of Some Birds During a Total Eclipse of the Sun

PAUL A. STEWART

Entomology Research Division, Agricultural Research Service, USDA
Oxford, N.C.

25 April 1970

From popular reports and newspaper articles I had been led to suppose that, during a total eclipse of the sun, birds normally go to roost and otherwise behave as at nightfall. Accordingly, my wife and I went to the Greenville, N.C., area with plans to observe birds going to roost during the total eclipse of the sun at midday on 7 March 1970.

About one-half hour before the eclipse was due to start, we went to a woods along a drainage ditch near Greenville and located several birds, including one Yellow-bellied Sapsucker (*Sphyrapicus varius*), two Song Sparrows (*Melospiza melodia*), and two Cardinals (*Richmondia cardinalis*). Of these we were able to follow only one Yellow-bellied Sapsucker and one Cardinal before and throughout the duration of the total eclipse. These two birds remained in view and continued moving about just as they had done before the eclipse started. The sapsucker moved from one position to another on the sides of two tree trunks in the 2 minutes and 57 seconds of the total eclipse; the Cardinal made three short flights to new positions among the small trees beside the ditch. A female Wood Duck (*Aix sponsa*) also flew down the ditch and gave its *hoo-eeek* call as it flew past us in the darkness. We lost it from view but found it on the water of the ditch some 200 feet below us when better visibility returned.

Thus, it appears that, although birds may sometimes go to roost during the darkness resulting from a total eclipse of the sun, this is not an invariable behavior response.



BRIEFS FOR THE FILES

Compiled by ROBERT P. TEULINGS
(all dates 1970 unless otherwise listed)

COMMON LOON - Individuals were sighted inland at Southern Pines, N.C., on 15 and 28 April by Jay Carter; at Raleigh on 2 May by Harry and Edmund LeGrand; and at Sumter, S.C., on 8 May by Evelyn Dabbs.

SOOTY SHEARWATER - Four were seen at Pea Island on 16 May, Harry and Edmund LeGrand.

DOUBLE-CRESTED CORMORANT - Single bird found inland at Raleigh, 5 April, Harry and Edmund LeGrand.

BLACK-CROWNED NIGHT HERON - One found early at Umstead Park, Raleigh on 31 March by Harry and Edmund LeGrand.

AMERICAN BITTERN - Scarce spring visitor at Chapel Hill, N.C., 4 April, James Pullman.

WHISTLING SWAN - Six were found inland near Reidsville, N.C., on 8 March, William and Ruth Noonan. Late straggler was reported at Pea Island on 16 May by Harry and Edmund LeGrand.

REDHEAD - A single bird was seen inland at North Wilkesboro, N.C., on 21 April, Wendell Smith.

CANVASBACK - One was found near Taylorsville, N.C., on 21 March by Wendell Smith.

COMMON GOLDENEYE - One was an unusual visitor at North Wilkesboro on 28 March, Wendell Smith.

UPLAND PLOVER - Four were observed at Wrightsville Beach, N.C., on 4 April by Frances Needham. One was also found at Chapel Hill, 27 April by Alex Hull and Joe Jones.

WHITE-RUMPED SANDPIPER - One was seen inland at North Wilkesboro 19 May by Wendell Smith.

LEAST SANDPIPER - Two were found at North Wilkesboro on 15 May by Wendell Smith, and one was seen late at Raleigh on 31 May by Harry and Edmund LeGrand.

- MARBLED GODWIT - A single bird was seen near Carolina Beach, N.C., on 25 April by Harry and Edmund LeGrand.
- AMERICAN AVOCET - Three were sighted near Carolina Beach on 25 April by Harry and Edmund LeGrand, and a flock of 30 was found at Bodie Island on 23 May by Plumer W. Wiseman.
- BLACK-NECKED STILT - Two birds were present at Hilton Head Island, S.C., 1-3 May, reported by Caroline Newhall.
- NORTHERN PHALAROPE - A single bird, a female, was found on Lake Wheeler near Raleigh on 3 May by Harry and Edmund LeGrand.
- BLACK TERN - Single birds were seen on 16 and 17 May at Pea Island by Harry and Edmund LeGrand.
- WESTERN KINGBIRD - One was perched on a dead tree on the shoulder of Silas Creek Pkwy, Winston-Salem, N.C., on 17 August 1969, an unusual inland sighting by Ramona R. Snavely.
- TRAILL'S FLYCATCHER - One was observed and heard calling on 8 April near Durham, N.C., by Mrs. Paul Payne.
- BANK SWALLOW - At least 15 were found by Harry and Edmund LeGrand on Bodie Island, 16 May. This species is seldom reported from the coast in spring.
- ROUGH-WINGED SWALLOW - One was early at Lake Johnson at Raleigh on 14 March, Robert Teulings.
- RED-BREASTED NUTHATCH - One lingered until 15 May at Southern Pines, N.C., Jay Carter.
- SHORT-BILLED MARSH WREN - One was a rare spring visitor at Raleigh 29 April, Robert Hader.
- WATER PIPIT - One was late at Raleigh, 9 May, Darryl Moffett and Harry LeGrand.
- PHILADELPHIA VIREO - Good study was made by Mrs. Paul Payne near Durham, N.C., on 22 April.
- ORANGE-CROWNED WARBLER - Single bird was seen near Durham 19 May by Mrs. Paul Payne.
- CERULEAN WARBLER - One was seen at Chapel Hill on 20 April by James Deaton and George Patterson, and one on 16 May at North Wilkesboro by Wendell Smith.
- WILSON'S WARBLER - Single birds seen by Wendell Smith on 4 May in North Wilkesboro and by James Pullman on 17 May near Chapel Hill.
- DICKCISSEL - One male was seen in Raleigh on 20 May by Robert Hader. A wintering bird in Southern Pines was last noted 9 April, Jay Carter.
- RUFIOUS-SIDED TOWHEE - A male of the white-eyed race was seen 19 April in Raleigh, Robert Hader.
- TREE SPARROW - Single bird seen 20 April near Durham by Mrs. Paul Payne.

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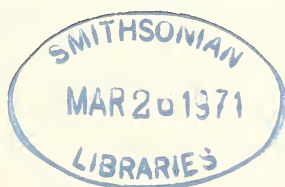
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OUR COVER—Geraldine Cox photographed a Ruddy Duck in Pamlico County, N.C., in the summer of 1969. Drawings by John W. Taylor are used by courtesy of the North Carolina Wildlife Resources Commission (p. 98 and 99).

SUMMER BIRDS AT A COASTAL MARSH IMPOUNDMENT IN NORTH CAROLINA

DALE LEWIS

From 4 June to 27 August 1969 I made regular visits to Pamlico Point impoundment for the purpose of determining the species of the summer bird population, their status, and their relative abundance. The location of this impoundment is about 35 deg. 18' N and 76 deg. 31' W, the extreme NE corner of Pamlico County, N.C. This area is part of a large marsh island and can be reached by boat from the nearest boat launch 2.5 miles away at Oyster Creek Landing. The 6-year-old impoundment was built for mosquito control; but the state owns and manages it now for waterfowl. It consists of four rectangular lakes (Fig. 1), each averaging about 200 acres, is maintained by spillways and large water pumps, and is rich in waterfowl food plants.

The vegetation of each lake differs because of the varying water and substrate conditions. For example, Lake 4 was drained this summer (1969) as part of the management program, and except for the drainage canals, it was essentially a vast mud flat. Lake 1 had been similarly drained last year but this year was full of water as were Lakes 2 and 3. The dominant water plants for the entire area are pondweed (*Potamogeton* sp.), widgeon grass (*Ruppia* sp.), musk grass (*Chara* sp.), algae, sea grass (*Distichlis spicata*), and marsh rush (*Juncus roemerianus*).

The dikes play an important ecological role by keeping saltier waters outside the impoundment from mixing with the impounded waters. Uniform marshes of cord grass (*Spartina cynosuroides*) and marsh rush extend along the periphery of the impoundment. Dike vegetation consists of low, scrubby growth and scattered areas of dense grasses. Common dike plants are sea myrtle (*Baccharis halimifolia*), sea ox-eye (*Borrichia frutescens*), foxtail grass (*Setaria magna*), sea grass, dog fennel (*Eupatorium capillifolium*), goldenrod (*Solidago* sp.), and winged sumac (*Rhus copallina*).

To quantify my observations I used Robert S. Arbib's (1957) abundance scale. I made one deviation from his system by applying his abundance scale of non-breeding birds to all observations, regardless of whether a bird seen was nesting in the impoundment. For each species listed the nesting status is given as well as other significant remarks about the bird's occurrence and feeding habits.

GREBES

Pied-billed Grebe: Common, nesting in every month of the summer. I saw numerous immatures on various occasions as early as 10 June, indicating relatively good nesting success. The last nesting record was 26 August, when two nests were located, one with five eggs and the other with two eggs. Late nesting of this species is apparently not unusual, especially farther south where Chabreck (1963) found Pied-billed Grebes nesting as late as September in Louisiana.

Horned Grebe: Very rare, not nesting. One was observed 1 July by William Post ¼ mile W of the impoundment. The bird was in breeding plumage, though it was most likely a straggler from the previous winter. There are no nesting records from North Carolina.

HERONS, EGRETS, AND ALLIES

No species except Least Bitterns nested. Probably the nearest heronry to the impoundment is on Starvation Island near Morehead, approximately 45 miles S of the impoundment. The number of waders increased in August, which seemed to be timed

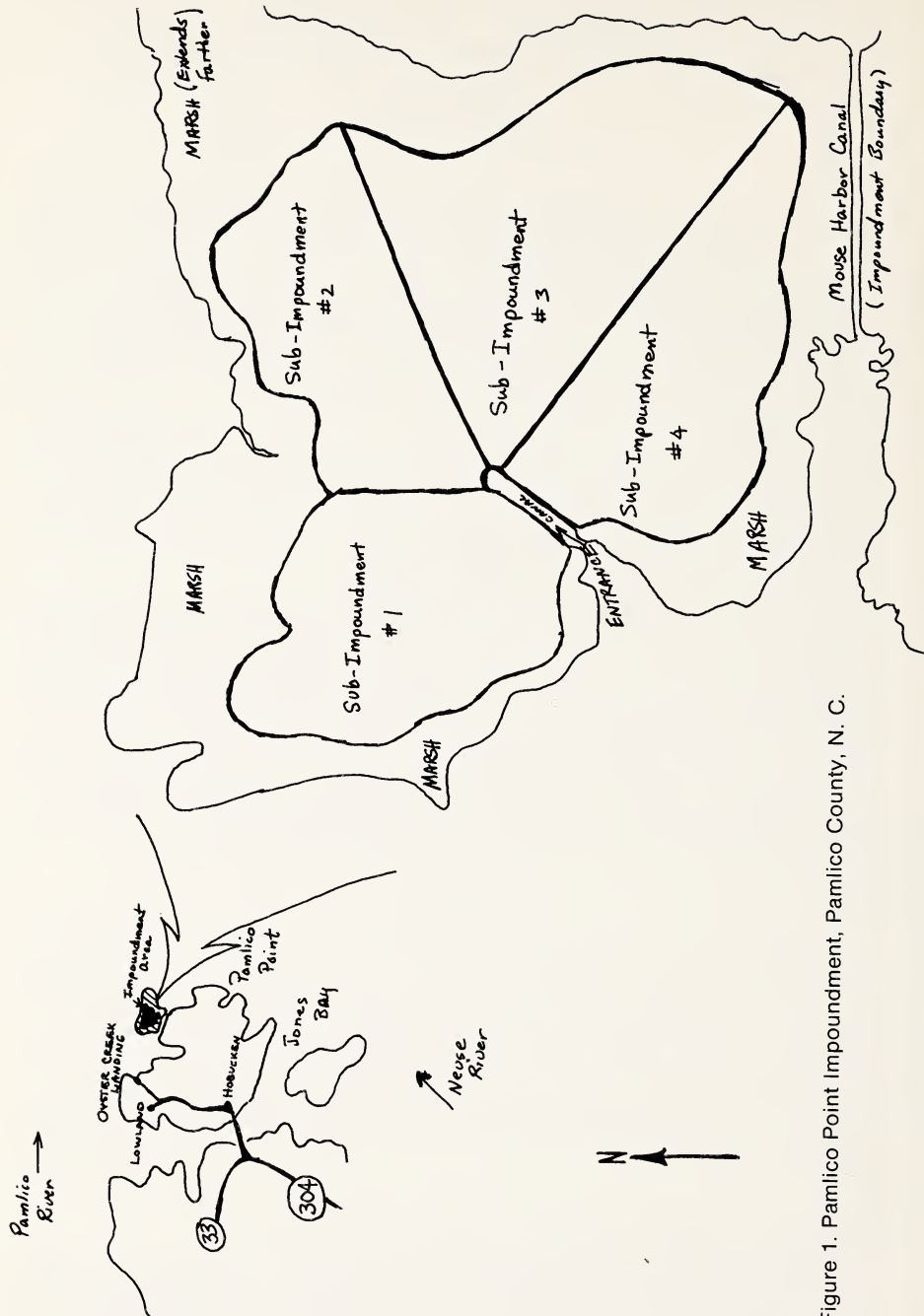


Figure 1. Pamlico Point Impoundment, Pamlico County, N. C.

with the termination of their nesting season. The abundance status for each species is an average for the whole summer:

Common Egret: Very common
Snowy Egret: Common
Great Blue Heron: Fairly common
Little Blue Heron: Rare
Louisiana Heron: Fairly common
Green Heron: Uncommon
Black-crowned Night Heron: Uncommon
Yellow-crowned Night Heron: Rare
Least Bittern: Common
Glossy Ibis: Fairly common

On 10 June 12 pairs of Least Bitterns were in Lake 3. Several nests were found, all within about 150 feet of each other. During the latter part of August herons and egrets roosted in Lakes 3 and 4. They would usually begin arriving in large flocks from all directions but mostly from the west by 7:30 PM. Of the approximately 300 individuals, 70% to 80% were Common Egrets. Generally, the birds left the roost by dawn.

DUCKS

Ducks most commonly nested on the dikes where the nests were concealed by natural cover of *Distichlis*. On 10 June a Green-winged Teal flushed from a dike with suitable nesting habitat, but efforts to locate a nest were unsuccessful. *Birds of North Carolina* (1959) gives no nesting records for this species in the state. There is apparently no nesting record of the Ruddy Duck from North Carolina. This species was fairly common all summer and 15 to 30 immatures were present on various occasions in August. In July Herman Strickland saw a family of six Ruddy ducklings. It is, therefore, believed that Ruddy Ducks did nest, though no nests were actually found.

Black Duck: Very common, nested
Gadwall: Rare, nested
Blue-winged Teal: Common, nested
Green-winged Teal: Very rare, nesting unlikely
Shoveler: Very rare (one), no nesting
Ruddy Duck: Fairly common, presumably nested

RAILS AND ALLIES

Rails were surprisingly few, even though habitat seemed optimum. Water snakes, which abundantly populate the impoundment area, might be one reason for the scarcity of rails. Water snakes are especially common in areas close to the dikes where rails would nest and brood.

A family of American Coots, consisting of two adults and a pair of chicks, was discovered on 10 June in Lake 3. The chicks were very small and could easily be held in the hand (Fig. 2). As far as can be determined, there are no past records of coots nesting in North Carolina, though Pearson and Walker observed a flock of 81 in Kitty Hawk Bay on 22 June 1933 (Pearson et al., 1959). There are two nesting records from South Carolina in recent years (Cutts, 1960; Post, 1961).

Clapper Rail: Rare, nested
Virginia Rail: Very rare, nesting unlikely
Common Gallinule: Uncommon, nested
American Coot: Rare, nested

SHORE BIRDS

A pair of Black-necked Stilts arrived in June and remained on the impoundment for the entire summer. In August they became noticeably territorial over a large area of Lake 4. When disturbed by human observers, they reacted by walking in random, erratic directions with their wings uplifted, uttering a series of loud call notes. If one of the birds flushed, instead of flying away, it would turn around, sometimes as far as 300 to 400 feet away. Flying only several feet about the water or flats, it would suddenly veer sharply to the side only 15 to 20 feet from the observer, while releasing a burst of loud call notes. These and other less conspicuous forms of territorial behavior suggested nesting, but I spent several hours looking for a nest without success. All Black-necked Stilt nesting records in this state are from Cape Hatteras National Seashore Park (Hoover, 1957). The Pamlico Point location lies inland by approximately 60 miles SW.

On 16 August six Wilson's Phalaropes in characteristic winter plumage were feeding in a small pool in Lake 4. This species is a scarce transient in North Carolina. Paul Sykes saw them in two consecutive years at Bodie Island in early September (Sykes, 1963a and 1963b).

Lake 4, which was mostly a vast mud flat, offered an excellent habitat for migrating shore birds. The peak occurrence was in late August when on several occasions 500 to 750 shore birds were present. During this time a limited banding project was carried out over a total of five days. The following shore birds were recorded in August. The only two species that might have nested were the Willet and Black-necked Stilt, but I found no positive evidence for either species.

Black-necked Stilt: Rare, only one pair

Black-bellied Plover: Rare

Semipalmated Plover: Uncommon*

Killdeer: Rare

Spotted Sandpiper: Fairly common*

Willet: Rare

Greater Yellowlegs: Common*

Lesser Yellowlegs: Very common*

Stilt Sandpiper: Uncommon* (banded 3)

Short-billed Dowitcher: Common*

Long-billed Dowitcher: Rare* (Fig. 3)

Pectoral Sandpiper: Common*

White-rumped Sandpiper: Very rare* (banded 1, Fig. 4)

Least Sandpiper: Common*

Semipalmated Sandpiper: Common*

Western Sandpiper: Common

Wilson's Phalarope: Rare

Common Snipe: Rare

*Species banded

GULLS, TERNS, AND SKIMMERS

No species nested on the impoundment and no unusual species were observed except for Black Skimmers, which do not often come this far inland. This species was seen twice during the summer. Black Terns appeared in late August and were fairly common.

OTHER SPECIES

Ospreys nested in surrounding areas and a single Marsh Hawk was seen on 21 August. The following passerines nested in the impoundment or in the peripheral marshes: Long-billed Marsh Wren, Red-winged Blackbird, and Seaside Sparrow. Seaside Sparrows



Figure 2.
American Coot
chick, left.



Figure 3.
Long-billed Dowitcher,
below.



Figure 4.
White-rumped
Sandpiper.

Photos by Geraldine Cox

occupied the linear zone of marsh that surrounds the impoundment. In June this species was common and sang during much of the day, frequently performing their flight-song. As the summer progressed and especially by August the number of Seaside had decreased noticeably.

GENERAL COMMENTS

Coastal marsh impoundments are becoming more numerous in this state with a total of 10 already in Pamlico County. With similar management programs and the similarity of the impoundments themselves, the species I found here might give some indication of what birds live on other impoundments during the summer. Much more field work is needed, however, to substantiate the distribution of questionable species and to supply information on the influence these impoundments will have on coastal birdlife and estuarine ecology in general. Robert Holmes (1965) studied an impounded salt marsh area only a few miles S of Pamlico Point on 10 August 1965. He listed several species that did not occur on the impoundment I studied: White Ibis, Sandwich Tern, and Caspian Tern.

ACKNOWLEDGEMENTS

Sincere thanks are extended to all those people who generously helped with my work on this project. I am particularly indebted to Geraldine Cox for photographing birds, identifying plants, and helping with the banding; Will Post for letting me use his banding equipment and for giving suggestions on this paper; Herman Strickland, N. C. Wildlife Biologist, for his assistance throughout the summer; and Dr. Harrison Tordoff for his helpful suggestions.

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4701 N. Delhi Road, Ann Arbor, Michigan 48103.

STATUS OF THE DOWITCHERS IN NORTH CAROLINA

GILBERT S. GRANT AND MICOU M. BROWNE

The status of the Short-billed Dowitcher (*Limnodromus griseus*) and the Long-billed Dowitcher (*Limnodromus scolopaceus*) in North Carolina needs to be revised. Spring, summer, and fall records are quite numerous and need not be cited here, but winter observations need to be studied carefully. A glance at the AOU *Check-list* (1957) points out the need for revising the winter range in North Carolina. It gives the winter range of the Short-billed Dowitcher (hereafter designated SBD) as "... coastal South Carolina south through Central America. . ." and the winter range of the Long-billed Dowitcher (hereafter LBD) as "... the Gulf coast of the United States (to Florida) south through Mexico...." Bent (1929) gives the winter range of the SBD as "north. . . probably rarely to North Carolina (Fort Macon)" and has about the same range for the LBD as the AOU *Check-list*. We will review some of the winter records of the two species of dowitchers in coastal North Carolina and make special reference to inland records, including a LBD specimen in March from Raleigh.

COASTAL RECORDS

The SBD appears to be a common and regular fall and spring transient, uncommon but regular visitor in summer, and a fairly common winter resident in coastal North Carolina. Spring, summer, and fall records are too numerous to cite here. Winter records include 115 SBD on the 1958 Christmas Count (*Chat*, 23:8), 36 on the 1959 count (*Chat*, 24:9), and 21 on the 1960 count (*Chat*, 25:8) including one at Hampstead in Pender County. Paul Sykes and H. A. Hespenheide identified 8 SBD by field marks and call on the 1965 Christmas Bird Count held on 28 December at Bodie-Pea Island (*Chat*, 30:19). Sixty-eight SBD were found on the 1968 count at Wilmington (*Chat*, 33:12) which was held on 28 December. Seven SBD were seen by Paul Sykes, Richard Peake, Browne, and Grant on the 1969 Christmas Count at Bodie-Pea Island held on 30 December (*Chat*, 34:11). Grant found seven SBD on 20 December 1969, one on 24 January 1970, and 14 on 25 January 1970 at West Onslow Beach in Onslow County.

Several spring, summer, and fall records (specimens in spring and fall) for the LBD in coastal North Carolina are well documented by Pearson, Brimley, and Brimley (1959). Additional records are four LBD studied carefully by Sykes at Knotts Island, Currituck Sound, on 10 March 1962 (*Chat*, 26:39). He noted the single call note of the LBD. Potter (*Chat*, 31:82) observed two LBD at Wilmington on 29 April 1967. Due to the difficulty in distinguishing these two species of dowitchers, the sight records are few in number. Grant observed seven LBD in a flock with seven SBD at West Onslow Beach on 20 December 1969. The single call note was heard and the bills were noticeably longer than those of the SBD nearby. These could have been either winter visitors or late fall migrants on this date.

There are numerous winter observations of dowitchers in coastal North Carolina which were not identified to species. Most are probably SBD since this appears to be the more common dowitcher during the winter. A brief look at the Christmas Bird Counts shows unspecified dowitchers were found at various North Carolina count locations in 1955, 1956, 1957, 1961, 1962, 1963, 1964, 1965, 1966, 1967, 1968, and 1969 (*Chat*, vol. 20-34). Forty were counted in 1966, 62 in 1967, 8 in 1968, and 53 in 1969. On the 1958, 1959, and 1960 Christmas Counts, all dowitchers were identified as SBD but both prior to and after this period most were simply listed as "dowitcher (sp.)." At any rate, these numbers indicate dowitchers are fairly common winter residents in coastal North Carolina.

INLAND RECORDS

Inland observations are few in number but do show that dowitchers are spring and fall transients over mountain, piedmont, and upper coastal plain North Carolina. The only mountain record is a SBD specimen (*L. g. hendersoni*) collected by Burleigh (Pearson, Brimley, and Brimley, 1959) on 5 July 1934 near Swannanoa, Buncombe County. Piedmont records include two Eastern Dowitchers (presumably SBD: specimens could not be located) taken on 30 August 1945 by Larry Crawford at Lake Jeanette, about 5 miles N of Greensboro (*Chat*, 10:19). At this same lake near Greensboro, one Eastern Dowitcher was observed on 7 September 1947 two on 13 September 1947, and two on 14 September 1947 by Oscar Paris and others (*Chat*, 12:35). Mattocks (*Chat*, 33:24-25) found dowitchers present at Brant Lake, near Greensboro, between 24 August and 7 October in 1966, 1967, and 1968. He found a maximum of 10 on 2 September 1967. Hader (*Chat*, 29:57) found one dowitcher on 26 August and one on 4, 5, 7, and 12 September 1964 at Lake Johnson near Raleigh. On 27 March 1965 Hader (*Chat*, 29:90) found one in non-breeding and one in breeding plumage, and on 3 May 1965 another in breeding plumage was at Raleigh. Hader (*Chat*, 31:25) found one or two dowitchers on nine occasions from 29 August through 15 October 1966. He (*Chat*, 33:60) and others saw 10 SBD on 7 September 1968 and one to four until 19 October 1968 at Raleigh. J. W. E. Joyner identified three SBD at Bynum's Pond in Nash County on 13 July 1958 (*Chat*, 23:39).

On 14 September 1968 William Post (pers. com.) and Browne banded two SBD at Lake Wheeler near Raleigh. Measurements for No. 1083-70809 were: weight 138.4 grams, wing 143 mm, total culmen 60.5 mm, and fat class I. Measurements for No. 1083-70810 were: weight 128.7 grams, wing 134 mm, total culmen 56.2 mm, and fat class I. Browne studied a dowitcher feeding with a Pectoral Sandpiper (*Erolia melanotos*) at Greenview Pond near Raleigh on 11 March 1969. We returned on 13 March 1969 and collected the bird, which was later identified as LBD by Roxie C. Laybourne at the United States National Museum. This represents the only known LBD specimen from inland North Carolina.

DISCUSSION

The best field mark is the three-note call of the SBD and the single-note call of the LBD (Robbins et al., 1966).

Numerous verifiable sight records of the SBD in winter along the coast of North Carolina indicate this bird is a fairly common winter resident there. The winter status of the LBD is not clearly known because of the lack of field identifications to species. Additional specimens and sight records with call notes heard are needed to clarify its status. Inland records indicate that both SBD and LBD are transients over the interior regions and are found more commonly during dry periods when numerous mud flats are exposed.

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Department of Zoology, North Carolina State University, Raleigh, N. C., and 2728 Cambridge Road, Raleigh, N. C., 10 September 1970.



Conservation

. . . with Marie Mellinger

Quality or Quantity

It is always a privilege to hear Dr. Eugene Odum, foremost ecologist in the southeast. In a recent talk at Calloway Gardens he compared man to a chicken and suggested that we have a choice of conserving and improving the quality of our environment, or living as chickens do in a confined modern broiler coop. He also spoke of the need of consolidating our efforts and the importance of personal involvement. In line with this everyone should see the film made by the University of Georgia and starring Dr. Odum. *A Search for an Ecological Balance* features Sapelo, but is equally applicable to any of the the coastal areas of North and South Carolina.

* * * * *

Seemingly the organization of a South Carolina Conservancy fell by the wayside, but we can report a new organization, *South Carolina Environmental Action, Inc.*, with Orion Hack, of Hilton Head, as President. This organization made a good beginning by sponsoring an essay contest for youths and a state wide photography contest publicizing polluted areas of South Carolina. Citizens of South Carolina interested in our environment might write Mr. Hack for details of this organization.

* * * * *

Congratulations to Will Post on his fellowship grant from the National Wildlife Federation. His thesis will compare the productivity of undisturbed (unditched) and disturbed salt marshes using the Seaside Sparrow as an indicator species.

* * * * *

There are more and more reports of birds succumbing from the direct and indirect effects of chemicals. We know the Bald Eagle is on its way to extinction. So too are the Osprey and the Brown Pelican. Now *Insight*, the news letter of the Bureau of Sport Fisheries and Wildlife, reports that the White-faced Ibis has been reduced 91% in Utah.

Yet an editorial in the Anderson *Independent* quotes Glenn Kimble, spokesman for Union Camp Paper Company, as saying "people get emotional about losing a species. But animals have been dying out every year clean back to the dinosaurs, and in most cases man had nothing to do with it. For that matter, it probably won't hurt mankind a whole heck of a lot in the long run if the whooping crane doesn't quite make it." The editorial continues "if man goes on polluting the air, the water, and the land, man will pollute himself out of existence, and what difference will that make to the whooping crane?"

* * * * *

Birders arise! We are equally at fault. We still have too many birders concerned only with the number of species on their life list. What good would be a list of 600 species if 500 species become extinct? Will it be fun to brag that "I saw the last Brown Pelican?" If birders do not do more than list species they will run out of species to list. A whole organization devoted only to "THE LIST" is a waste of a lot of valuable time and talent.

* * * * *

And re pollution, The Rev. K. Neill Foster had some some pertinent remarks. "Everyone can be expected to be against pollution (at least until it begins to cost to clean up). Pollution many times is profit. Pollution is always people!" And finally a quote attributed to Senator Muskie, "Pollution is one of the dirtiest words in the language."

* * * * *

Trees are increasingly important in our landscape as air filters and temperature controls. They also add greatly to the beauty of camp and recreation sites. Yet almost every recreation area we visited this summer had trees carelessly cut and slashed by knives, axes, and hatchets, with bleeding gashes left to doom the life of the tree. The same people who let their youngsters enjoy such acts of vandalism would complain long and loudly if there were no trees to shade their camp sites.

* * * * *

In the final analysis, each of us is part of our environment. Each of us must do something about it.

And a must reading for everybody is *The Environmental Handbook*, edited by Garrett de Bell, available for \$1.00 from Dept. CS, Ballantine Books, Inc. 36 West 20th St., New York, N. Y. 10003.

Bald Head Fate Still Undecided

A proposal for the State of North Carolina to purchase Bald Head (Smith Island) will almost certainly come before the General Assembly in 1971. If you have not as yet expressed your views to Governor Scott, the Department of Conservation and Development, or your legislator, please do so promptly.

Cape Romain Wilderness Proposal

The Interior Department's proposal to designate as wilderness 28,000 acres within the Cape Romain National Wildlife Refuge in South Carolina is still pending. A map and other information about Cape Romain are available from the Refuge Manager, Cape Romain National Wildlife Refuge, McClellanville, S.C. 29458, or the Regional Director, Bureau of Sport Fisheries and Wildlife, Peachtree-Seventh Building, Atlanta, Georgia 30323. Written comments can be sent to the Regional Director in Atlanta until 1 March 1971.

Carolina Birds and Birders

. . . with Willie Morrison

Scouts Urge Protection for Birds of Prey

How does a Boy Scout troop manage to get into the improbable position of trying to have a law protecting birds of prey passed by the state legislature? BSA Troop 98 of North Augusta, S.C., is in that position. I am an adult leader with that troop, but I am not sure how we got there. It seems that the boys came up with the idea out of thin air, but you will probably understand the story better if I start at the beginning.

In August 1969 I stopped by the Savannah River Ecology Laboratory, an Atomic Energy Commission sponsored ecology research center operated by the University of Georgia, to discuss a few items with Dr. I. Lehr Brisbin Jr. During the conversation I asked him if he had an idea for a nature oriented project to be presented by our Scout troop at the "Wonderful World of Scouting," an annual Scout fair held at Augusta, Ga. Brisbin suggested a predator education project of displaying and flying free hawks trained by falconry techniques. Brisbin felt that education in hawk conservation was badly needed, and he volunteered to serve as a technical advisor on diet and training procedures.

The idea was discussed with the junior leaders of the troop at the next meeting. Despite dire warnings about hard work, long hours, and small chances of success, the junior leaders decided this was to be the troop project for the fair. As the fair was not to be held until May 1970, the project was set aside with the understanding that concrete planning and work on the project would begin around Christmas.

Up to this point, the project had been strictly educational, but during this fermentation period before Christmas something happened. I do not know who started it, but the boys started talking along the lines that South Carolina laws on hawks were wrong; something should be done about it; and we'll circulate a petition to see if we can get the laws changed. By December every boy in the troop seemed to know that we were going to circulate the petition and get the law changed.

Page after page could be written about the work done by the boys of Troop 98 in the next few months. Let's just say that hundreds of hours of work by Scouts Ray Holzworth, Bud Lemon, Jim Reinig, Jerry Knighton, and other boys in the troop plus timely helping hands by Calvin Zippler, falconer Bill Robbins, and many members of the Savannah River Ecology Laboratory resulted in a successful presentation at the fair. The large number of signatures on our petition at the fair encouraged us to take the next step of contacting a state legislator. State Senator G.W. McMillian of Aiken County gave us a courteous hearing and agreed to introduce a bill implementing the points in our petition to the South Carolina Legislature when the new session begins in January 1971.—
GERALD E. KNIGHTON, 3 Linnet Loop, N. Augusta, S.C. 29841, 13 October 1970

Pulpwood Pest Pursuers

During a visit to Westvaco's Pulpwood Yard here in early September, we were fascinated to watch hundreds of swallows, tentatively identified as Barn Swallows, in motion. From the woodyard manager we learned they come in July and remain until late September each year and are the most effective insecticide Westvaco could wish for. They destroy millions of insects that are common pests in woodyards, and my

information is that they seek out wood and lumber yards all over the country. — MARTHA BEE ANDERSON, Hampton, S.C.

On Squirrel-proofing Feeders

After much trouble from a vast squirrel population, feeders at our house have been fastened to lengths of pipe, which are set up in open places in the yard far away from the house and trees. For final squirrel-proofing, we keep the pipes heavily greased with Vaseline. With no place to jump from and a greasy pole to climb, the squirrels have to be satisfied with spillage on the ground below! —MARTHA BEE ANDERSON, Hampton, S. C.

Any Egrets at Your Feeder Lately?

From W. H. Jeffers, Editor, The Pee Dee Natural History Society Newsletter, Summer 1970:

Calvin Clyde of Effingham, S. C., has been enjoying an unusual visitor to his bird "feeder" this summer. As soon as he puts a few small fish in a shallow pan of water, an American Egret drops down gracefully from the trees nearby and proceeds to swallow his free meal. Calvin rescued the egret nestling from the ground at the Indiantown rookery in the spring, took it home and raised it. Now it stays around for the daily handout!

Brown-headed Nuthatches with Racing Stripes

The following report of two aberrant plumaged nuthatches was sent to me by Gerald E. Knighton, 3 Linnet Loop, N. Augusta, S. C. 29841.

"Concerning the Brown-headed Nuthatches with the 'racing stripe': The gentleman who had this unusual pair at his nesting box is George F. Young, 625 Morton Ave., N. E. Aiken, S. C. I saw the birds on 22 March 1970. The white spot found on the back of the neck of the Brown-headed Nuthatches was in both cases elongated into a stripe. One of the pair had a white stripe which ran up the back of the neck and down the center of the crown to approximately above the eye. The other one of the pair had the spot enlarged into a stripe running up the back of the neck but not extending on the crown.

"Mr. Young is an ardent backyard bird photographer, but due to light conditions he did not succeed in photographing the bird with the longest stripe before it disappeared a few days later. However, he did get a slide of the other bird of the pair."





ATTRACTING BIRDS TO THE GARDEN

ELIZABETH BARNHILL CLARKSON

The most important step in attracting birds is to provide water. It may be a bird bath or something as simple as a garbage can lid or flower pot saucer; but, birds need clean, fresh water in winter as well as summer for drinking and bathing.

Next in importance are shrubs and vines for food and nesting sites. Amur River Privet hedge plants and *Ligustrum japonicum* either trimmed as trees or untrimmed, are the favorites in our garden for winter berries. They make evergreen trees to 25 feet and berries hang on until eaten by birds. Some of the best summer berries are wild cherry, mulberry, pokeberry, elderberry and blackberry. Some of the best plants we use are:

Shrubs and Vines

Amur River Privet
Barberry
Blackberry
Elderberry
Eleagnus
Honeysuckle

Ligustrum
Mahonia
Pokeberry
Pyracantha
Trumpet Vine
Virginia Creeper
Wild Grape

Trees

Black Haw
Chinese Flowering Crabs
Dogwood
Hollies
Japanese Weeping Cherry
Mulberry

Native Cedar
Pines
Sour Gum
Vitex
Wild Cherry
Yoshino Cherry

Herbs

Cornflower
Mustard

Poppies
Sunflower

Flowers Attracting Hummingbirds

Abelia	Lantana
Azalea	Larkspur
Beebalm	Mimosa
Butterfly Bush	Petunia
Columbine	Sultana (Impatiens)
Foxglove	Trumpet Vine
Honeysuckle	Tuberoses

Feeding trays build a larger bird population than an area can normally feed, and if the supply SUDDENLY CEASES birds find it difficult to obtain sufficient food. Especially in nesting season nestlings may die because parents cannot find enough insect food for themselves and their young. In winter adult birds may suffer due to lack of food which lowers their resistance to sudden bitter cold. In prolonged snow or cold put out grain, crumbs, cracked nuts, suet, etc., where birds can find them. My advice is: do not build up an artificially large population unless you continue.

These are helpful hints if you begin feeding birds. Place feeders where you will enjoy them. Feeders with automatic hoppers containing cracked chickfeed, small bird seed in mixture, or sun-flower seed require the least effort and range in price from \$1.00 to \$15.00 but may be homemade. A quart fruit jar turned on its side and suspended by a wire from a limb makes an excellent feeder for small birds such as chickadees, titmice, nuthatches and Purple Finches. Construct suet baskets of a 3 by 5 inch board covered on one side by ½ inch square mesh wire sometimes called hardware cloth leaving enough space to slip suet between wire and board.

Wing Haven is a garden as well as Bird Sanctuary and I know how insects and weeds affect gardeners; but, my MOST IMPORTANT WARNING is about the careless and promiscuous use of weed killers and pesticides. Inform yourself as to the danger they hold for wildlife before using. Excellent fertilizers for grass have been made hazardous for birds and wildlife by addition of insecticides and weed killers. People who would never intentionally harm birdlife use such fertilizers without realizing their effects on birds. Attracting birds to a poisoned lawn is inhumane. Two books on the subject are:

Gardening Without Poisons - Beatrice Trum Hunter, Houghton Mifflin Co.

Beneficial Insects - Lester A. Swan, Harper and Row.

The second warning is to keep pet cats in the house at night and, during the nesting season, in daytime as well. Birds are defenseless at night and cats see well in the dark. It is better to choose between the two pleasures, cats and birds, than to try to have both.

A partial list of food for feeding trays follows:

Peanuts

Peanut hearts

Peanut butter cooked with oatmeal or cornmeal and fat

Sunflower seed

Cracked chickfeed

Mixed bird seed

Apple cut in two

Raisins

Doughnuts

Suet

Plain rich pastry

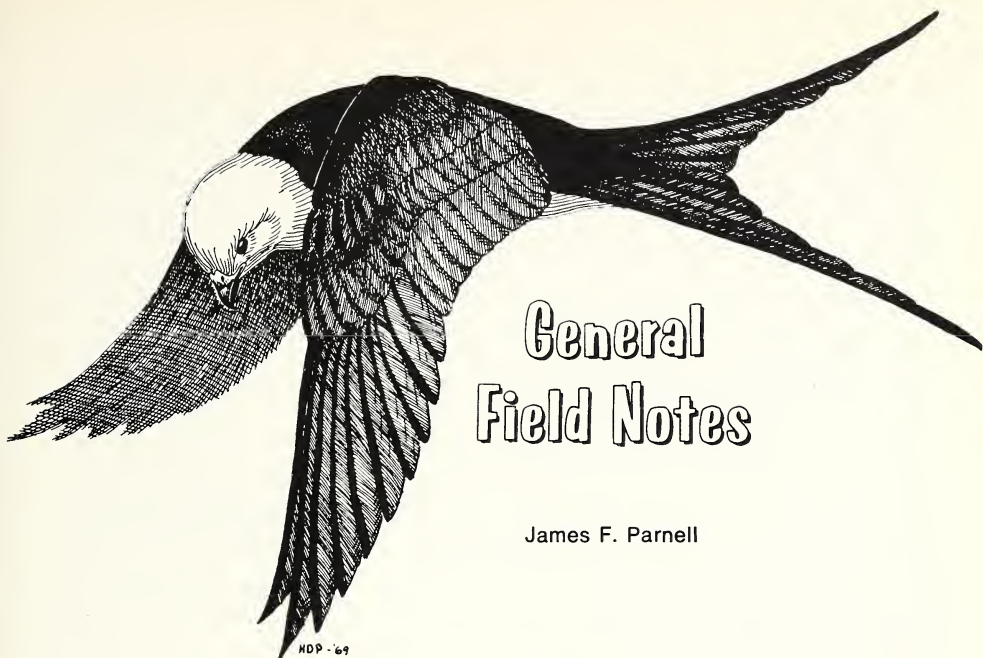
Cornbread crumbled

Slices of orange and cake for Baltimore Orioles

One part sugar, 2 parts water for hummingbirds

It may take several weeks to get boarders. In the meantime change food as it spoils or dries out.

(Continued on Page 110)



General Field Notes

James F. Parnell

An Undescribed Heronry at Swansboro, N.C.

GILBERT S. GRANT

Route 1, Box 363, Sneads Ferry, N.C.

21 May 1970

The Swansboro heronry was first discovered in 1969 by scanning the islands in the White Oak River near Swansboro, N.C. It is located about 300 yards S of the point where NC Hwy 24 crosses the White Oak River at the boundary between Onslow and Carteret Counties. The island appears to lie just inside Onslow County and is about 21 miles W of the Starvation Island heronry at Morehead City. It is accessible only by boat, which can be launched nearby.

The island is about 3 acres in size with the periphery consisting almost entirely of cord grass (*Spartina alterniflora*). Trees, mostly waxmyrtle (*Myrica cerifera*), red cedar (*Juniperus virginiana*), and willow (*Salix* sp.), cover the higher ground which is less than an acre in size. This colony appears to have been active for only two or three years prior to its discovery in 1969.

I counted 30 Green Heron (*Butorides virescens*) nests, 25 Little Blue Heron (*Florida caerulea*) nests, 40 Cattle Egret (*Bubulcus ibis*) nests, 25 Snowy Egret (*Leucophoyx thula*) nests, and 60 Louisiana Heron (*Hydranassa tricolor*) nests there on 23 June 1969. No Common Egret (*Casmerodius albus*) or Glossy Ibis (*Plegadis falcinellus*) nests were found here although Common Egrets fed in the immediate vicinity.

White-fronted Goose near Raleigh, N.C.

HARRY LEGRAND JR.

EDMUND LEGRAND

331 Yadkin Drive, Raleigh, N.C. 27609

12 April 1970

On the morning of 1 March 1970 while observing Canada Geese and ducks on Lake Wheeler near Raleigh, Wake County, North Carolina, we saw a full-plumaged

White-fronted Goose (*Anser albifrons*). It was alone and perched on a low stump just above the water. Although the bird was about ½ mile away, it was easily identified with a 20X spotting scope. Its pink bill and vertical stripe behind it were easily visible. Also noted were the orange legs, the white flank stripe, and the gray-brown color of the head, neck and back. The black breast blotches were not seen well because of the distance, and the goose seemed darker around the belly than the birds pictured in the field guides. The goose was also seen on the afternoons of 1 through 3 March by Robert J. Hader, Mike Browne, Gilbert Grant, and others.

We have no knowledge of captive or domestic White-fronted Geese in the Raleigh area. Several pinioned White-fronted Geese were kept in the Wendell-Zebulon area a few years ago. However, they had been moved to Wilson, N.C., well prior to this sighting. This, coupled with the short stay of the goose in the area, makes it appear that the observation was of a wild bird. The first published record of the White-fronted Goose in Wake County, this is one of few inland records for North Carolina.

[Since waterfowl are so commonly kept in captivity, extralimital records must always be suspect. However, the group is also very mobile and apparently authentic records of strays are relatively common. Thus while records such as the above are always very exciting, it must be recognized that there is always the possibility that the bird represents an escape from a captive flock.—DEPT. ED.]

An Unrecorded Specimen Of the King Eider from North Carolina

MARCUS B. SIMPSON JR.

P. O. Box 167, Statesville, N. C.

20 May 1970

Pearson, Brimley, and Brimley (*Birds of North Carolina*, 1959) list but four occasions when the King Eider (*Somateria spectabilis*) has been reported in North Carolina; and a check through volumes 21-33 of the *Chat* reveals no subsequent observations. In addition to the 6 specimens taken during the flight of December 1908, individuals were collected along the coast on 1 December 1921, 14 December 1924, and in November 1936.

During July 1969, while examining the Anatidae collection of the American Museum of Natural History in New York City, I located an adult female King Eider taken on 3 January 1925 at Manteo, N. C. The specimen, which was collected by J. H. Hickson, is catalogued as AMNH No. 750003; and so far as I am aware, has not been previously reported in the literature.

I also examined the specimen which Pearson and the Brimleys stated was collected on 14 December 1924, and the date appears to be in error. The bird was actually collected on 10 December 1924, but it was received at the Museum on 14 December. The date was erroneously reported to the Brimleys and subsequently included in the 1942 edition of *Birds of North Carolina*.

Sooty Tern and Audubon's Shearwaters Off North Carolina in September

MIKE M. BROWNE

2728 Cambridge Road, Raleigh, N.C.

GILBERT S. GRANT

Route 1, Box 363, Sneads Ferry, N.C.

We departed from Morehead City, N.C., aboard the *Captain Stacy* for the Gulf Stream on 7 September 1969 to study pelagic birds. We traveled parallel to Shackleford Island

until reaching Cape Lookout and then turned ENE for the remainder of the outgoing trip. The boat stopped in the Gulf Stream about 55 miles out of Morehead City and only about 20 miles SE of Cape Hatteras.

Ten to 15 phalaropes were about 3 miles offshore of Morehead City. The light was not good enough at this early hour (06:00) to allow specific determinations. A total of 25 Audubon's Shearwaters (*Puffinus lherminieri*) were observed between 30 and 55 miles out of Morehead City. However, some may have been counted more than once as they were feeding and moving about at the time of the sightings. One Cory's Shearwater (*P. diomedea*) was 45 miles offshore, one was 30 miles offshore, and 15 were studied only 1 mile off Cape Lookout.

In addition, four unidentified jaegers were seen flying near an adult Sooty Tern (*Sterna fuscata*) about 55 miles out of Morehead City. Both observers studied the tern carefully for several minutes. It is especially interesting to note that this occurrence of the Sooty Tern was not associated with a storm as has generally been the case for North Carolina records.

Status of the Least Flycatcher On the Highlands Plateau

MARCUS B. SIMPSON JR.
P. O. Box 167, Statesville, N.C.

20 May 1970

Although Pearson, Brimley, and Brimley (1959) regarded the Least Flycatcher (*Empidonax minimus*) as a regular summer resident in the mountainous portions of North Carolina, the paucity of records from the area prompted them to comment that "our knowledge of its numbers and its distribution is quite limited." Nevertheless, observations of the bird in southeastern Macon County were reported as early as 1885; and subsequent records from the region provide a sound basis for assessing the status of the Least Flycatcher on the Highlands Plateau.

As defined by Odum (1949) the Highlands Plateau consists of a region of rolling table land including the town of Highlands and extending approximately 5 miles to the N, NE, and NW. Elevations vary from 3,000 to 5,054 feet, with the bulk of the terrain lying around 4,000 feet above sea level. As pointed out by Johnston (1964) the area is characterized by heavy annual rainfall, averaging 81 inches but occasionally exceeding 100 inches per year. Temperatures are cool during the summer months, with an average July temperature of 66 degrees F. Most of the area is covered by mixed, second growth forests which have been described in detail by Quarterman and Keever (1947).

The first records of the Least Flycatcher in the Highlands region came when Brewster (1886) reported his observations of the bird from the last week of May 1885, during which period "a day rarely passed without two or three being noted." The following year, C.L. Boynton reported a spring arrival date of 24 April (1886); and Pearson, Brimley, and Brimley (1959) subsequently listed this sighting as the earliest date for the bird in North Carolina. Torrey (1898) found a male in song near the Turtlepond Road in late May 1896; and C.S. Brimley collected a single bird there on 9 May 1908.

Due apparently to the absence of observers in the area, the bird was not reported again until the week of 20-26 June 1930, when A.H. Howell noted males in song within the city limits of Highlands. Stevenson (1941) conducted extensive field work in the Highlands area during the period 15 June to 6 September 1937 and 1 June to 4 July 1941; and his studies indicated that the Least Flycatcher was rare above 4,000 feet, common from 3,100 to 4,000 feet, and uncommon below 3,100 feet, with the lowest record at an altitude of 2,950 feet. Subsequent observations of singing males were reported in Highlands on 5 July 1944 by Lydia Sargent and from Horse Cove and the Scaly Mountain Road on 9 July 1960 by J.A. Check. Nests have been reported by Check on 16 July 1960 along Whiteside Cove Road and by M.L. Heddon near Buck Creek on 1

May 1946. Although Marie Huger has noted an early arrival date of 4 March, Johnston (1964) accepted Heddon's Buck Creek record of 16 April 1946 as the earliest spring date for the species. Toliver Crunkleton has noted extreme dates of 24 April to 1 October 1951 at Buttermilk Level (3,800 feet), but the latest departure record appears to be Huger's observation of 5 October.

Between 16 and 21 June 1969, I searched for Least Flycatchers along all passable roads on the Highlands Plateau; and nine calling males were repeatedly located at sites ranging from 2,900 feet to 3,950 feet in elevation. Individuals were noted at the following locales: two birds were on adjacent territories in Horse Cove (2,900 feet), one was noted at the junction of Route 106 and Turtlepond Road (3,950 feet), two were along Route 106 just W of the Highlands city limits (3,800 feet), two were noted on S.R. 1547 some .3 miles from US 64 (3,760 feet), and single birds were heard along SR 1564 (3,750 feet) and along US 64 just above Dry Falls (3,840 feet). Habitat selection at these nine sites consistently involved mixed, open, second-growth forests of maple, oak, hickory, and pine; and the bird's home range within these woodlands invariably bordered on open areas such as pasture land or orchards. Limitations of time precluded any search for nests, and consequently no evidence of breeding was noted.

ACKNOWLEDGMENTS

I am indebted to Highlands Biological Station for permission to examine and summarize the data contained in their biota file cards on the Least Flycatcher.

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Breeding Cedar Waxwings In Great Craggy and Black Mountains

MARCUS B. SIMPSON JR.
P. O. Box 167, Statesville, N. C.

MARJORIE ROGERS
HOLLIS J. ROGERS
420 E. Radiance Drive, Greensboro, N.C.

8 July 1970

On 17 June 1970, while exploring portions of the Great Craggy Mountains of Buncombe County, N.C., Simpson noted a pair of Cedar Waxwings (*Bombycilla cedrorum*) carrying food into a small, open grove of hawthorns (*Crataegus* sp.) 50 yards S of Beetree Gap (elevation 4,920 feet). Subsequent investigation revealed a loose, bulky nest of twigs and grass at a height of 9½ feet in a 12-foot hawthorn shrub. Examination of the nest revealed four blind, naked young. The two adults, showing no

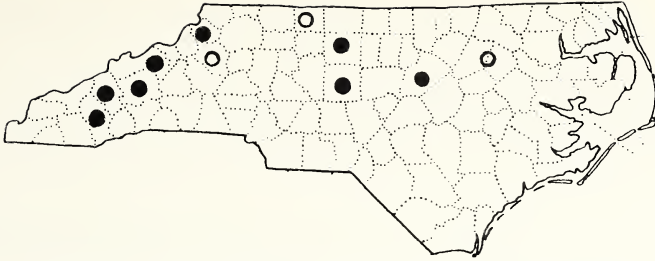


Figure 1. Cedar Waxwing nesting sites in North Carolina.

sign of alarm, were seen repeatedly carrying food to the nestlings. Specimens of the shrub were collected, and S.W. Leonard, curator of the UNC-CH Herbarium, identified the plant as *Crataegus punctata* Jacq.

During the previous summer, the Rogers observed a pair of waxwings constructing a nest 20 feet up in a Fraser fir (*Abies fraseri*) on Wilson Ridge in the Black Mountains of Yancey County, N.C. The nest, located at Campsite No. 1 in Mt. Mitchell State Park at an elevation of 6,320 feet, was begun on 20 July 1969 and completed on 26 July. The Rogers noted one egg present on 26 July and two on 27 July, but their subsequent departure precluded any further study of the nest. However, Roberta Grey and Noel Free (pers. com.) watched the adults carrying food and heard the cries of the young at this same nest on 22 through 24 August 1970.

To our knowledge, there are no previously documented nesting records of the Cedar Waxwing from these two mountain ranges. Cairns (1889, 1891) stated that the bird "breeds in June" in these mountains, but he gave no specific details to support this contention. Brewster (1886) noted a pair "apparently about to breed in some spruces bordering a clearing at 5000 feet" during his visit to the Black Mountains in June 1885. Burleigh (1941) reported a pair gathering nesting material on Mt. Mitchell on 10 August 1931 in a clearing at 6,600 feet, but no other breeding evidence was noted during his 5-year study of the area.

It is interesting that the majority of published nest records of the Cedar Waxwing in North Carolina are from the piedmont or low mountain valleys, while the bulk of the population is found above 3,000 feet during most of the breeding season. Positive breeding evidence has been reported from Jackson County (Peake, 1963), Haywood County (Lesley, 1947), Buncombe County (Chambers, 1947), Watauga County (Pearson et al., 1942), Guilford County (Shaftesbury, 1949), Randolph County (Mattocks, 1950), and Wake County (Brimley, 1891). Reports of "nests" but with no details about their contents have been published from Caldwell County (Whitner, 1956), Stokes County (Craft, 1949), and from Rocky Mount (Joyner, 1954). These records are summarized on the distribution map (Fig. 1). Much remains to be learned about the breeding distribution of this bird in the Carolinas, and observers should be alert to document nesting records when possible.

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Problem Solving by a Pair of Nesting Starlings

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On 24 May 1970, near Oxford, N.C., a pair of Starlings (*Sturnus vulgaris*) was observed carrying food to their 5 or 6 day-old nestlings inside a barn about 8 feet above the ground where a hole had been drilled by a Yellow-shafted Flicker (*Colaptes auratus*). In an effort to get some information on the Starling's problem-solving capability, I attached to the side of the barn a sheet of plywood, 3 feet by 1½ feet, containing 13 holes. The holes were 1¼ inches in diameter, slightly too small for access by the parent birds. A 1-inch board was placed between the plywood and the wall of the barn to enhance the appearance that all holes through the plywood opened into cavities. However, when the face of the plywood was viewed from a right-angle position, the cavity entrance appeared as a dark hole; whereas, the barn wall could be seen through the other holes in the plywood. The parent birds were not marked, and it was thus impossible to relate the observations to individual birds.

Twenty minutes later, after the Starlings had several times flown near the nest entrance and away without alighting, one alighted on the plywood. It examined two holes, one after another, seemingly at random, and then flew away only to circle back to the hole on the extreme left in the upper row of holes. The bird examined the three upper holes, one after another, left to right, and then moved down to the next lower row of holes and examined them, right to left, until the nest entrance was found at the third hole from the extreme right. The Starling making the second visit to the nest, presumably the other bird of the pair, examined only two incorrect holes before going to the correct one. In 18 visits to the nest during the following hour, the Starlings went directly to the correct hole all except four times when one and two incorrect holes were earlier examined.

The plywood sheet was then moved so the nest entrance was aligned with a different hole. Then both returning birds went first to the hole which was formerly the correct one and then examined two and three holes, respectively, before going to the correct one. Thereafter, the birds went directly to the correct hole in all but one of eight visits, and then they examined only one incorrect hole prior to making the correct choice. The plywood was twice later changed so that the nest entrance was aligned with different holes, and the birds flew directly to the correct hole in each of the return visits.

I then changed the position of the plywood and made a second hole in the side of the barn aligned with a hole in the plywood about 8 inches above the one over the nesting hole. In 14 following visits the parent birds went first to the correct hole, and in 12 they went to the incorrect hole. The nestlings were then removed from the nest, and the visiting parents later checked six and nine holes through the plywood, respectively, after

first checking those over the holes through the side of the barn. The parent birds then went to the roof of the barn and did not return to the nest in the following 15 minutes that I watched.

These Starlings appeared to be guided to their nest by the cavity appearance of the hole and by the calls of the nestlings, and they improved in efficiency at finding the nest with added experience. Their nest attentiveness quickly waned when there were no young in the nest to guide them to the nest or to furnish search-stimulating calls.

Wintering Blue Grosbeaks And Yellowthroats at Chapel Hill, N.C.

JAMES O. PULLMAN

Route 6, Box 149, Chapel Hill, N.C. 27514

14 July 1970

Two Blue Grosbeaks (*Guiraca caerulea*) spent the Winter of 1969-1970 near Chapel Hill, N.C., on the Mason Farm, a wildlife preserve of the University of North Carolina. First observed on 14 December 1969, they were seen again on at least 20 dates extending through March.

The birds, in brown plumage, frequented an area characterized by hedges of multiflora rose surrounded by large open fields of sorghum and soybean stubble. They were easily found at almost every attempt because of a tendency to perch in a "preferred zone" in the hedge, usually less than 100 feet in length. In the course of the winter, however, the zone drifted along the hedgerow, first 300 feet to the north and then 1,000 to the west.

At all times, the birds seemed healthy and fully active, this despite the fact that January temperatures averaged 9 degrees F below the 30-year mean, with weekly averages as much as 18 degrees below normal (*Monthly Weather Review* 98, 329). Solid precipitation was light, however, with just one severe ice storm which thawed quickly and no substantial snow. The birds were seen to feed (often with Cardinals) in the sorghum stubble and, once, in giant ragweed. They probably utilized the abundant rose hips as well.

The two birds were easily separated by individual plumage characteristics. Primarily, Bird A had rather thin, whitish wing bars and a rich brown crown, while the bars of Bird B were tan and the crown and nape duller with a blue-gray cast. These differences tended to become less distinct as the season progressed. On 15 February Bird A was found with a 1-inch diameter blue patch on the lower abdomen. By 15 March the blue covered a region from upper belly to vent. Plumage changes of Bird B, during this time, were much more subtle, with no patches of blue. Presumably Birds A and B were male and female respectively. On 29 March, the first soft songs were heard from Bird A. The birds had always been closely, but passively, associated. On this date, for the first time, they were frequently seen to chase each other over the fields. Unfortunately, attempts to band these birds were unsuccessful, so it is uncertain whether they joined the general fringillid exodus of early April or remained with the local breeding population.

I am aware of only one other winter record for this species in North Carolina. One was listed on the Stanly County Christmas count in 1966 (*Chat*, 31:22). Such records appear to be quite unusual for the United States as a whole. The Bent volumes on finches (US Natl. Mus., Bull. 237, p. 74) mention only that the species has been found to winter rarely in Louisiana and casually in Connecticut.

In view of the severity of the weather, it is odd that one or more Yellowthroats (*Geothlypis trichas*) also chose to winter on the Mason Farm this year. A banded male was found on 7 December and again on 17 January. An unbanded male, presumably a different bird, was seen on 1 and 8 March, and a female on 15 March. Migrating Yellowthroats normally reach Chapel Hill during the last week in March, and winter records are uncommon. The above sightings were all made in or near wet, weedy fields in which the Swamp Sparrow (*Melospiza georgiana*) was characteristic.

BRIEFS FOR THE FILES

Compiled by ROBERT P. TEULINGS
Route 2, Chapel Hill, N. C. 27514
(All dates 1970)

- COMMON LOON - Single stragglers were found at Ocracoke Inlet, N.C., by Henry Armistead on 18 June and at Wrightsville Beach, N.C., on 7 August by Frances Needham.
- RED-THROATED LOON - Very late individuals were seen at Wrightsville Beach, N. C., on 24 June by Frances Needham and at Cherry Grove Beach, S.C., on 14 July by Royce Hough.
- HORNED GREBE - One was late at Wrightsville Beach, N.C., on 10 June, Frances Needham.
- BROWN PELICAN - 68 adults with 31 unfledged young were counted in a nesting colony on North Rock Island inside Ocracoke Inlet on the North Carolina coast, 7 July, by Roger Steiner.
- GANNET - On 27 February hundreds, perhaps thousands, of Gannets were seen off Bodie Island, Pea Island, and Ocracoke by Dr. and Mrs. R. R. Tasker and Helmut C. Mueller.
- LOUISIANA HERON - One at McKinney Hatchery near Southern Pines, N.C., on 12 August was an unusual summer visitor for that area, Jay Carter.
- GLOSSY IBIS - 215 were counted near the Bodie Island, N.C., lighthouse on 15 June by Henry Armistead; 60 were seen in flight over Wrightsville Beach, N.C., 20 July by Dorothy Earle.
- ROSEATE SPOONBILL - One was present at Hilton Head Island, S.C., from 16 July to 6 August, far north of its usual range, Nancy Butler.
- BLUE-WINGED TEAL - An adult and a brood of eight downy young were seen at Bodie Island, N.C., on 18 June, Henry Armistead.
- COMMON SCOTER - A late individual was sighted on North River near Beaufort, N.C., on 18 June by John Fussell, Tom Wade, and C.J. Spears.
- RED-BREASTED MERGANSER - A young bird not yet capable of flight was seen near Sneads Ferry, N.C., on 6 July by Gilbert Grant.
- BLACK VULTURE - Nesting was observed at Wm. B. Umstead State Park near Raleigh, N.C., this summer by Harry LeGrand, an uncommon record for Wake County. Two young were successfully fledged in early July.
- MISSISSIPPI KITE - As many as 15 were seen at Magnolia Gardens, S.C., in late June and early July, T.A. Beckett III.
- SHARP-SHINNED HAWK - One sighted along the coast at Otway, Carteret Co., N.C., on 22 June was very unusual for summer, Tom Wade and John Fussell.
- BALD EAGLE - A pair nesting at Hilton Head Island, S.C., successfully fledged two young, as reported by Orion Hack. Eugene Pond recorded sightings of an adult eagle on 10 June and an immature on 25 June near Beaufort, N.C.
- MARSH HAWK - One seen 29 June on the coast near Stacy, N. C., was well south of its usual breeding range, John Thomspon, C.J. Spears, and John Fussell.
- KING RAIL - An adult and three chicks were found at Huntington Beach State Park, Georgetown Co., S.C., on 4 August by Oliver Ferguson and Lewis Patton.
- AMERICAN WOODCOCK - One found near Sumter, S.C., on 19 July was an uncommon summer visitor for that locality, Eli Parker and Robert Teulings.
- LONG-BILLED CURLEW - A single bird was observed closely on Ocracoke Island, N.C., 18 June, by Henry Armistead.
- KNOT - Late spring and summer sightings were recorded at West Onslow Beach, N.C., where 30 were seen on 31 May, 20 on 15 June, and 1 on 6 July by Gilbert Grant. Ten Knots were also found on Masonboro Island near Wilmington, N.C., on 31 July by Frances Needham.



SOOTY TERN
Charleston, S.C.
July 1970

Photo by
John Henry Dick

BLACK-NECKED STILT - Although no nesting records were reported this season, a single bird was seen near Georgetown, S.C., on 4 August by Oliver W. Ferguson and 10 were sighted on Bodie Island, N.C., on 5 August by Dan F. Keeney.

AMERICAN AVOCET - 30 were seen at Bodie Island on 5 August by Dan F. Keeney.

FORSTER'S TERN - Significant numbers of adults and immatures were reported from late May through July in the North River, New River, and Alligator Bay areas along the North Carolina coast by John Fussell and Gilbert Grant.

SOOTY TERN - A pair were sighted on 30 June and again several times during July on Deveaux Bank near Charleston, S.C., far north of their normal summer range, T.A. Beckett, Stanley Langston, and John H. Dick.

TRAILL'S FLYCATCHER - Four pairs were present this summer in a wooded swamp near North Wilkesboro, N.C., where breeding has been recorded almost every year since 1956, Wendell P. Smith.

PURPLE MARTIN - A large post-breeding build-up was noted at Durham, N.C., where several thousand were counted in a roost on 23 July, Mrs. Paul S. Payne and Bea Lemen.

SOLITARY VIREO - In Wake County, N.C., at least 15 singing males were present through the summer at Wm. B. Umstead State Park; one nest was found by Harry LeGrand. Nesting occurred again at Southern Pines where 5 pairs were observed by Jay Carter in Weymouth Woods Nature Preserve.

WARBLERS - Field studies by John Fussell revealed *Ovenbirds* present through the summer in Croatan National Forest in the coastal plain near Morehead City, N.C. Fussell also recorded repeated sightings of a female *Black-and-white Warbler* and a pair of *Worm-eating Warblers* during the period from early June through July. All three species are regarded as scarce or rare breeders in the locality mentioned.

SCARLET TANAGER - A singing male observed near Sumter on 18 July was an unusual mid-summer record for the S.C. coastal plain, Evelyn Dabbs, Robert and Elizabeth Teulings.

PAINTED BUNTING - Rhoda Koshak observed a pair feeding young at Washington in Beaufort Co., N.C., in early June, as reported by Geraldine Cox. This appears to be the northernmost breeding record for the state.

SONG SPARROW - Observations were again reported of Song Sparrows summering eastward of their normal breeding range in the N.C. piedmont. A male was found singing on territory in late May at Lake Raleigh in Wake County by Robert Hader, and a small colony was apparently nesting near Durham where three singing males were heard in mid-June by Robert and Elizabeth Teulings.

SNOW BUNTING - A flock of about 12 was seen at the NE end of Ocracoke Island, 28 February by Dr. and Mrs. R. R. Tasker and Helmut C. Mueller.



CAROLINA BIRDS AND BIRDERS

(Continued from Page 100)

These books on attracting birds are excellent but some plants suggested are impractical for the Charlotte area.

The Book of Bird Life - A. A. Allen (one chapter on attracting)

Audubon Guild To Attracting Birds - John H. Baker

Songbirds In Your Garden - John K. Terres

Place bird houses not less than 25 feet apart away from trees preferably on 8 foot pipe driven 2 feet into the ground. Place boxes during winter or early spring so they can weather before a nesting time. Some species nest several times so late boxes may catch a later nesting. Do not clean houses in summer. Wait until November, remove nesting material, clean and spray with Bird House Powder from any pet shop. Carolina Wrens and Screech Owls begin to nest in February; chickadees, bluebirds, flickers, Downy Woodpeckers, and Tufted Titmice in March; House Wrens and Great Crested Flycatchers in April.

We use one size box, placed not less than 25 feet apart, 6 feet from ground on iron pipe away from trees, for bluebirds, House Wrens, chickadees, titmice, nuthatches, Downy Woodpeckers and Great Crested Flycatchers. The size is 4 or 5 inches square inside, 9 inches high, hole 1½ inches in diameter placed two inches from top of box. Have a removable top or side for cleaning purposes. Never make hole less than 1¼ inches in diameter.

Flickers require a box 6½ X 6½ inches square by 16 to 24 inches high, hole 2½ inches in diameter placed 2 inches from top. Use rough lumber which facilitates the climb from nest to exit hole. We have had Screech Owls nest in this size box.

Never put more than one nesting compartment to a box except for Purple Martins. They nest in colonies and each compartment should be 6 X 6 inches square, 6 inches high, hole 2½ inches in diameter placed 1 inch above floor, box placed 15 to 20 feet above ground in open space near water.

Wood Ducks need a box 12 inches square by 18 to 24 inches high, hole 4½ inches in diameter placed 12 to 16 inches above floor. Box should be 10 to 20 feet above ground near water. Pennsylvania Game Commission perfected a metal predator proof Wood Duck box and specifications are in *Birds of Charlotte and Mecklenburg County*.

[The above material was adapted from Mrs. Clarkson's very attractive and informative check-list, *Birds of Charlotte and Mecklenburg County*, which was revised and reprinted in 1970 for benefit of Mecklenburg Audubon Society. - ED.]

BOOK REVIEW

ORNITHOLOGY IN LABORATORY AND FIELD (Fourth Edition). Olin S. Pettingill Jr. Burgess Publishing Company, 426 S. Sixth Street, Minneapolis, Minn. 55415, 1970. 524 p. Illus. Index. \$11.95.

If you wonder how birds cope with certain problems in their environment and why they behave as they do, you are probably looking for a book that will take you beyond the field guides and Bent's *Life Histories*. One of the best references of this type, also the most comprehensive and up-to-date I have seen, is Pettingill's *Ornithology in Laboratory and Field*. Written on the level of a good college biology text and generously illustrated by Walter J. Breckenridge, this book gives the bird student the necessary vocabulary and background for independent study. Each chapter, and sometimes each topic within a chapter, ends with a list of references to encourage further reading.

A partial list of chapter headings offers an idea of the scope of Pettingill's *Ornithology*: Feathers and Feather Tracts, Anatomy and Physiology, Distribution, Behavior, Migration, Territory, Song, Mating, Nests and Nest-building, Young and Their Development, and Parental Care. Nine appendices cover such topics as research methods, preparation of papers for publication, ornithological bibliographies and current journals, clutch sizes, and ectoparasites. Originally written for class work in laboratory and field, this widely used text book also serves as a desk encyclopedia of ornithology because it is fully indexed and carefully organized.

I hope every CBC member will at least read the chapter on behavior. Some aspects of bird study require access to skin collections or other scientific tools not available to most bird watchers. The knowledgeable amateur, however, can study behavior with little more than a binocular, notebook, pencil, timepiece, and patience. If the rare species elude you, do not despair. Pesky Starlings and House Sparrows are fine species for behavior studies!—EFP



REQUEST FOR GULL REPORTS

During May through July of each year for a five year period, Ring-billed Gulls (*Larus delawarensis*) from three Great Lakes colonies will be wing-marked with 1.5 inch-diameter "Saflag" tags. Each colony is represented by a specific color. An attempt is being made to determine the dispersal pattern, migration route, and winter range for each population. Anyone observing such wing-marked gulls is asked to notify DR. WILLIAM E. SOUTHERN, Department of Biological Sciences, Northern Illinois University, DeKalb, Illinois 60115. Please report each observation of marked individuals even though the same bird may be sighted on different days. The following information is desired: **date, exact location, marker color, and the observer's name.** Your assistance in this aspect of the project will be greatly appreciated. Respondents will receive information pertaining to colony locations and the date of marking.

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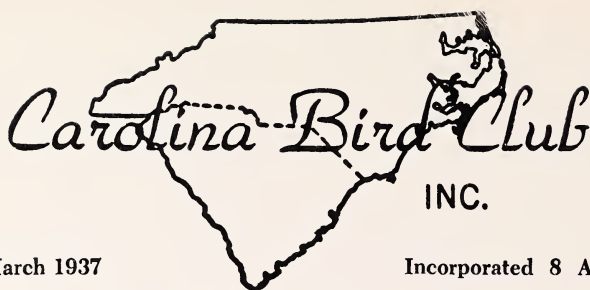
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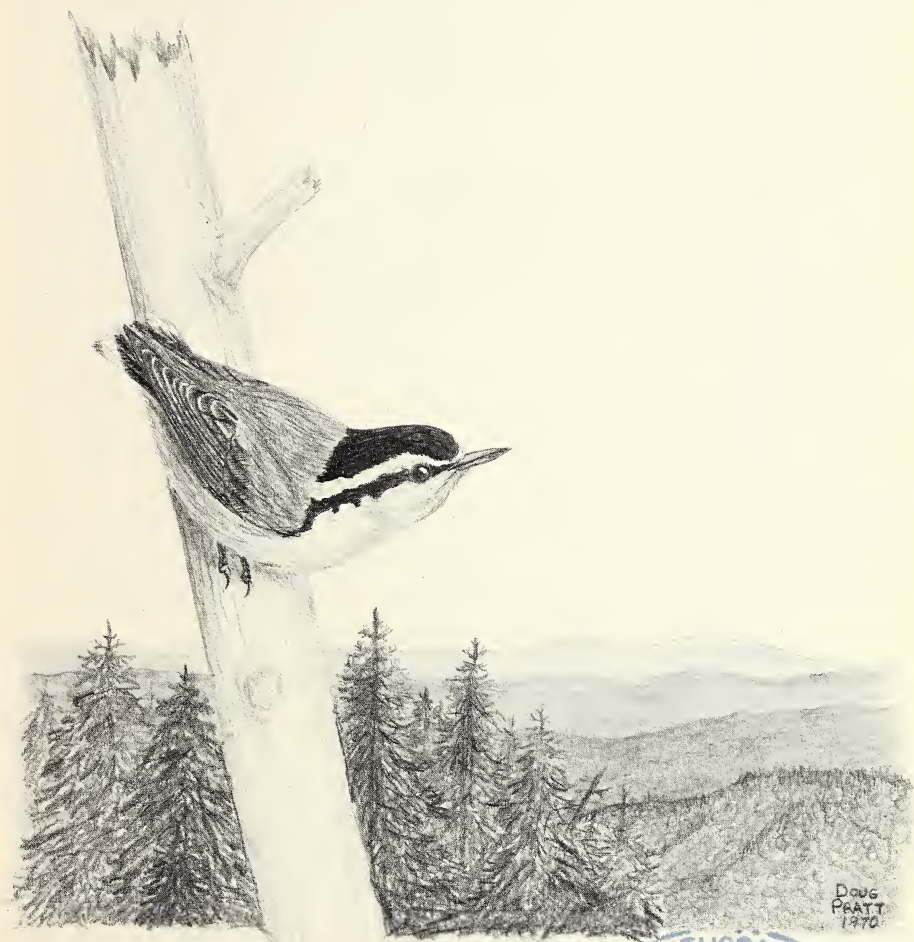
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OUR COVER—A Red-breasted Nuthatch surveys the mountain scenery in a drawing by H. Douglas Pratt, who also has a major paper and an informal article in this issue based on field work while he was a Seasonal Ranger-Naturalist in the Great Smoky Mountains National Park. Doug is presently doing graduate work in zoology at Louisiana State University.

ADDITIONAL NOTES ON THE BIRDS OF THE GREAT SMOKY MOUNTAINS NATIONAL PARK IN NORTH CAROLINA

H. DOUGLAS PRATT

The Great Smoky Mountains National Park is a vast area encompassing the higher mountains of the ridge that forms the state line between North Carolina and Tennessee. Over half of the approximately 800 square miles in the park lie in North Carolina. The region has been of great interest to ornithologists and other biologists since early times because of the great variety of habitats that are to be found within relatively short distances of each other. For a review of the general natural history of the area, the reader is referred to *Great Smoky Mountains Natural History Handbook* (Stupka, 1960).

Currently the authoritative reference work on the birds of the park is Arthur Stupka's *Notes on the Birds of Great Smoky Mountains National Park* (1963). The author of that work served with distinction for many years as Chief Naturalist of the park. The book summarizes all the data available prior to its publication, and it gives a historical review of ornithological work in the region. More recently, a field check-list ("Birds of the Great Smoky Mountains") was prepared by Seasonal Ranger-Naturalist Fred J. Alsop III and published by the park in 1968. The check-list indicates the status of each species by use of abbreviated notation. Both of these publications are excellent, and they are accurate to the extent that anything about a changeable subject such as wildlife can be. There are, however, many gaps in the information presented in them, especially with regard to the bird life of the North Carolina portion of the park. Both Stupka and Alsop compiled most of their data in Tennessee, as is understandable since the Park Headquarters is in Gatlinburg, Tennessee, and Alsop's duties placed him primarily in Cades Cove, also in that state.

During the summers of 1969 and 1970, I was privileged to work as a Seasonal Ranger-Naturalist in the Great Smoky Mountains. My residence was in the Oconaluftee area near Cherokee, N.C., and my duties familiarized me with the bird life of a section of the park that had previously been somewhat neglected ornithologically. I made many observations during this time that were at variance with the published information about the park.

Two areas deserve special mention. The Oconaluftee area itself is maintained in a pastoral state by the National Park Service in order to preserve the pioneer atmosphere of the valley. Consequently, it is similar in many respects to Cades Cove in Tennessee. Many of the birds found here are not typical of the heavily forested Smokies, but rather are those one would expect in the piedmont. Several lowland species have only recently invaded the Oconaluftee area. A similar situation prevails in the Cataloochee Valley, at the extreme eastern end of the park. This valley has been almost unexplored ornithologically. My studies there, though not extensive, did reveal the presence of several species hitherto unrecorded in the North Carolina portion of the park.

The following is a species by species account of the present status in the North Carolina portion of the park of those species whose status either has changed or has not been published previously.

GREEN HERON, *Butorides virescens*

Stupka (1963) regards this bird as "... an uncommon migrant and a rare breeder." Alsop lists the bird as to be expected only in Cades Cove, and all records cited by Stupka

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are from Tennessee. I observed this species twice in 1970 along Raven Fork near the park boundary. One sighting was in June, the other in August. The Green Heron should be expected in suitable habitat on the North Carolina side of the park, at least as a visitor, perhaps as a nonbreeding summer resident. Proper habitat for nesting is, however, lacking.

COMMON EGRET, *Casmerodius albus*

On 10 July 1970 a Common Egret perched in the top of a sycamore tree in the National Park Service Quarters Area at Oconaluftee. The weather was damp and overcast. The record is the first for the species from the North Carolina side of the park. It should not be expected regularly.

TURKEY VULTURE, *Cathartes aura*

Although Stupka (1963) states that this species is found at low altitudes throughout the park, he cites no records from North Carolina. Alsop's list indicates that it is to be expected only in Cades Cove. My observations indicate that the Turkey Vulture is a common summer resident in the Oconaluftee area and the southern part of the Blue Ridge Parkway, including the Heintooga Road. A large "buzzard roost" exists on top of the hill behind the Oconaluftee Job Corps Conservation Center. Often during the summer as many as 30 Turkey Vultures can be seen soaring over the area. There is, however, no direct evidence of the birds' breeding in the area.

GOSHAWK, *Accipiter gentilis*

On 15 June 1970 I was conducting the organized bird walk sponsored by the National Park Service. Our party had reached Heintooga Overlook on Balsam Mountain by about 11:20 A.M. The sky was unusually bright and clear, there being less of the mist so characteristic of the Great Smoky Mountains than usual. While we were standing at the overlook, a large hawk flew into view from our right apparently from several hundred yards down the slope of Balsam Mountain. It flew strongly upward, not soaring, to our eye level at which time it was approximately 200 yards away from the observers. It then continued in the same direction and disappeared from view behind the ridge. The bird was observed in 7 X 35 binoculars for about 20 seconds in excellent light with the sun to our backs.

Several things about the bird were immediately apparent. It was as large as a Common Raven, dark steel gray above and almost white below, totally devoid of any hint of brown or rufous. In shape it was like a short-winged harrier, the tail appearing proportionately longer than that of a Cooper's Hawk. Another striking feature was a strongly contrasting black mark behind the eye, separate from the cap. I noted the last feature quite well, as I at first thought the bird might be a Peregrine Falcon, which has occurred in the park previously. The black mark was, however, different from that of a Peregrine Falcon, and the bird's general shape showed that it was not a falcon but an accipiter. The next possibility was that the bird was a Cooper's Hawk, and this was suggested by some members of the party. To me, the bird was strikingly different from the Cooper's Hawk, which is an uncommon summer bird in the park. After considerable thought I am completely convinced that the bird in question was a Goshawk.

On 3 July 1970 while stopped at Alexander's View on the Heintooga-Round Bottom Road I saw a large accipiter soaring in the distance. The time was approximately 3:00 P.M. in clear sunny weather. The bird appeared to be dark gray above and all white below; however, the bird was a considerable distance away, and it was necessary to use binoculars to distinguish any color pattern. The locality of this observation is approximately 3 miles from Heintooga Overlook where the Goshawk was seen. I think

that there is a good possibility that this bird was also a Goshawk, possibly the same individual seen on 15 June.

According to Helmut C. Mueller (pers. com.), the Goshawk is extending its range in the southern Appalachians, but this extension has not been previously noted in North Carolina. These observations thus constitute the first record of the Goshawk in the Great Smoky Mountains, and the second sight record for the state. Mary Enloe saw one at Franklin, N.C., on 2 March 1969 (*Chat*, 34:79).

EASTERN KINGBIRD, *Tyrannus tyrannus*

This species has not been previously reported from the North Carolina side of the park. Stupka (1963) regards it as a transient and "... scarce summer resident." Of 80 records cited by him, only seven occurred during the breeding season (June-July). On 9 June and again on 23 June 1970, I saw Eastern Kingbirds in the Cataloochee Valley. Although few in number, the birds' presence is at least circumstantial evidence that they may nest there. Outside the Cataloochee area, this species must be regarded as only a transient, except in Cades Cove where the species is also found during June according to Alsop's check-list and my personal observations. During August of 1970, Eastern Kingbirds were fairly common in the Oconaluftee area, but they had not been previously observed there during the summer.

BARN SWALLOW, *Hirundo rustica*

I discovered the first nesting of the Barn Swallow in the North Carolina portion of the park in 1969 (Pratt, 1970). The species is now abundant in the Oconaluftee area during June and July but apparently leaves the area in early August.

RED-WINGED BLACKBIRD, *Agelaius phoeniceus*

This species apparently nests fairly commonly along the watercourses in the Cataloochee Valley. Both adults and young were present during June of 1970. As many as 30 individuals may have been there, making this a larger colony than the one in Cades Cove (Stupka, 1963). Red-winged Blackbirds also are seen in the Oconaluftee area in early June when the hayfields are being mowed, but there is no evidence that they nest there.

BALTIMORE ORIOLE, *Icterus galbula*

Stupka (1963) regards this species as only a transient. He may, indeed, be correct, but there is a possibility that the Baltimore Oriole may breed sparingly in the park. A singing adult male was noted at Smokemont on 20 and 21 July 1970. The species has also been reported from the Oconaluftee meadows during early June. Both of these areas are at low elevations.

BROWN-HEADED COWBIRD, *Molothrus ater*

The Brown-headed Cowbird is more common in early summer in the Oconaluftee area than Stupka's book would indicate. It is a frequently seen species in June during the mowing of the hayfields. In addition, this species seems to occur more commonly at high altitudes on the North Carolina side of the park than elsewhere. Cowbirds were frequently seen during June of 1970 at Black Camp Gap (4,522 feet) and at various altitudes along the Blue Ridge Parkway from Oconaluftee to Heintooga.

ROSE-BREASTED GROSBEEK, *Pheucticus ludovicianus*

Stupka (1963) states that the lowest limit of the breeding range of this species is approximately 2,950 feet, and that low-altitude summer records represent visitors from higher elevations. However, Rose-breasted Grosbeaks were observed frequently in the Oconaluftee area along Big Cove Road (2,100 feet) from 29 June through July 1970. These observations included family groups with many young birds not yet in full plumage. While this suggests the possibility of nesting in the vicinity, no nest was found.

RED CROSSBILL, *Loxia curvirostra*

Although this species is recognized as occurring in most areas that contain Canadian Zone forest in the Southern Appalachians, there have been no published records of it in the Balsam Range. During July and August of 1970 I saw Red Crossbills at several localities in the Balsams. These included Wolf Laurel Gap, the Heintooga area, and a locality between Heintooga and Paul's Gap. All of these are at high altitudes (over 5,000 feet) and contain growths of red spruce (*Picea rubens*) and Fraser fir (*Abies fraseri*).

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Museum of Zoology, Louisiana State University, Baton Rouge, Louisiana.

THREE-YEAR STUDY OF THE HERONRY AT ALLIGATOR BAY, N.C.

GILBERT S. GRANT

The Alligator Bay heronry near Sneads Ferry, N.C., was studied intensively during the 1968, 1969, and 1970 breeding seasons. For a description of the location, vegetation, and history of this colony see Grant (1967). The heronry consists of a chain of small islands in the center of Alligator Bay. I have numbered these islands beginning with Island 1 as the easternmost and ending with Island 4 as the westernmost. In 1967 (Grant, 1967) three islands were occupied, but since that time growth of bushes, primarily waxmyrtle (*Myrica cerifera*) and silverling (*Baccharis* sp.), on the fourth island has created new heron nest sites there. Breeding waders are the Green Heron (*Butorides virescens*), Little Blue Heron (*Florida caerula*), Cattle Egret (*Bubulcus ibis*), Common Egret (*Casmerodius albus*), Snowy Egret (*Leucophoyx thula*), Louisiana Heron (*Hydranassa tricolor*), and Glossy Ibis (*Plegadis falcinellus*). In addition, Willet (*Catoptrophorus semipalmatus*), Red-winged Blackbird (*Agelaius phoeniceus*), and Boat-tailed Grackle (*Cassidix mexicanus*) nests are found on the islands.

ISLAND DISTRIBUTION OF NESTS

Numbers of nests per island from 1968 to 1970 appear in Table 1. In 1968 a total of 275 pairs of herons and egrets nested on the four islands in Alligator Bay. The number of nests swelled to an all-time high of 523 in 1969 but decreased to 369 in 1970 (Table 2). Islands 1 and 2 supported 190 and 199 nests, respectively, in 1969 but the number of nests decreased to 55 (Island 1) and 69 (Island 2) in 1970. Both Islands 1 and 2 exhibited large annual increases in the number of nests up to 1969, but many waxmyrtles were dying and falling down at this time. These are the oldest islands (vegetatively) and the large accumulation of droppings is apparently killing the trees. The

TABLE 1. *Distribution of herons and egrets by islands at the Alligator Bay, N.C., heronry.*

Year	Island 1	Island 2	Island 3	Island 4
1968	154	85	32	4
1969	190	199	116	18
1970	55	69	164	81

TABLE 2. *Number of nests of each species during 1968-1970 study at Alligator Bay, N. C.*

Species	1968	1969	1970
Green Heron	20	38	10
Little Blue Heron	55	46	49
Cattle Egret	45	140	81
Common Egret	60	85	68
Snowy Egret	30	45	40
Louisiana Heron	65	146	114
Glossy Ibis	0	23	7
Total	275	523	369

TABLE 3. *Nesting chronology at Alligator Bay, N. C.,
heronry 31 May 1968 and 30 May 1969.**

Species	Nest-building	Number of nests each stage		
		Egg	Egg and young	Young
Cattle Egret	2	9 (9)	—	— (4)
Snowy Egret	—	4 (8)	—	1
Green Heron	—	4	2	2
Little Blue Heron	—	2	—	1 (11)
Louisiana Heron	—	1	—	20 (3)
Common Egret	—	— (1)	—	11 (17)

*1969 data in parentheses.

only plant that seems to survive in quantity at the heavy accumulation sites is pokeweed (*Phytolacca rigida*), which cannot support heron nests. Trees will probably continue to die in this area for several years and therefore reduce the nesting sites available in this part of the colony. Two hackberries (*Celtis* sp.) are shading out some of the waxmyrtles on Islands 1 and 2, and these large trees are not used to any extent by the waders for nest sites. In addition, the mud flat connecting Island 1 to the mainland (on low tide) seems to be rising somewhat and may eventually form a land bridge giving some predator species easier access to this island. If this happens, Island 1 will probably be abandoned by the herons and egrets. Verification of this was noted in 1970 when that half of the island closest to the mainland did not support any nests.

A rapid increase in the number of nests on Islands 3 and 4 can be correlated to the increase in nesting sites made available by the growth of bushes and trees there. Only 16 pairs of herons nested on Island 3 in 1967 (Grant, 1967), but it supported 164 nests in 1970 (Table 1). A similar increase can be noted on Island 4 with only four nests in 1968 (none prior to 1968) but 81 in 1970. The vegetation on Islands 3 and 4 should continue to grow and increase the nesting area in this part of the colony.

Another factor contributing to the increase in the number of birds here is a new impoundment at West Onslow Beach (2 miles SW of colony). Converted from a black needlerush (*Juncus roemerianus*) marsh four years ago, this impoundment is the feeding grounds for several hundred herons, egrets, and ibises throughout each summer.

NUMBER OF NESTS BY SPECIES

Fluctuations in the numbers of each nesting species between 1968 and 1970 appear in Table 2. An increase for every species except the Little Blue Heron occurred from 1968 to 1969, but practically all decreased from 1969 to 1970. Cattle Egret figures are low because the counts were made the last week of May each year and they are late nesters. Broods initiated late in the season were not counted since individual nests were not marked. Young are still found in some nests until mid-September.

NESTING CHRONOLOGY AND COMPETITION FOR NEST SITES

On 31 May 1968 and 30 May 1969 I recorded the various stages of the nesting cycle of several species of herons and egrets in the colony (Table 3). Cattle and Snowy Egrets appeared to be later nesters than the other species. Green and Little Blue Herons were intermediate in the breeding cycle on these dates, while the Common Egret and Louisiana Heron were early breeders.

Greater competition for nest sites during the 1970 breeding season would be expected with a decrease in suitable nesting sites due to the dying of much supporting vegetation. The Green Heron, an intermediate nester (Table 3), declined from 38 nests in 1969 to 10 in 1970. The Cattle Egret, a late nester (Table 3; Adams, 1963; Beckett, 1965), declined from 140 nests in 1969 to 81 in 1970. Other species, such as the Little Blue Heron,

Common Egret, and Snowy Egret, remained relatively stable while the Louisiana Heron declined noticeably. Green Herons nest typically around the edges in low shrubbery and are relatively low on the social order (less aggressive), perhaps accounting for their decline in numbers. It was quite evident that the larger herons and egrets had taken over much of this edge shrubbery where only Green Herons had nested previously. The decline in the number of Cattle Egrets can probably be attributed to their arriving at the colony late in the breeding season after many sites had been chosen. The Cattle Egret is second to the Common Egret (Adams, 1963) in social dominance and would probably have maintained its numbers had it arrived and been physiologically ready to begin nesting at the same time as the earlier-nesting species. Little Blue Herons seem to be intermediate both as a nesting wader and in social dominance, but they have actually shown a slight increase from the 1969 to the 1970 breeding season. The Common Egret, being an early nester (Table 3; Beckett, 1965; Teal, 1965) and at the top of the social order (Adams, 1963; pers. obs.), nested in generally the same numbers all three years. The Snowy Egret is intermediate in social dominance and a late nester (Table 3; Beckett, 1965; Teal, 1965), but it was able to maintain its numbers at Alligator Bay. Adams (1963) found Snowy Egrets to be early nesters at Battery Island, near Southport, N.C. An early nester such as the Louisiana Heron would be expected to maintain its numbers since it had second choice (after Common Egret) of nest sites early in the breeding season, but this was not the case in 1970. The area on that part of Island 1 closest to the mainland which was not used in 1970, perhaps because of easier predator access, had been used almost exclusively by Louisiana Herons in 1969. Glossy Ibis appear to be rather erratic nesters at this colony. Thirteen nests were found for the first time in 1962, but only three were found in 1967 (Grant, 1967). No nests were built in 1968, an all-time high of 23 were counted in 1969, and only seven were found in 1970 (Table 2). Glossy Ibis consistently nest later than the heron species in New York (Post, Enders, and Davis, 1970). The increase in abundance of Cattle Egrets, also late nesters, at the Alligator Bay colony may be having a detrimental effect on the Glossy Ibis. Both species began nesting there in the early 1960s (Grant, 1967) but the ibis has exhibited very little build-up while Cattle Egrets have increased annually up to 1969. (The decline in 1970 is attributed to other factors described earlier in this paper.) It seems probable that the more aggressive Cattle Egret is competing with the Glossy Ibis for nest sites late in the breeding season and may be forcing the ibis to nest elsewhere, perhaps to the north.

ROOSTING NOTES

A count of the herons, egrets, and ibises coming in to roost was made on 27 July 1969 at Alligator Bay. Between 18:00 and 20:55 a total of 3,025 herons, egrets, and ibises joined an estimated 500 to 1,000 birds already present at the colony. The roost count cannot be used as a means of measuring the productivity of the colony in 1969 because there was no way to determine how many of these nested and were raised here, how many were post-seasonal dispersants from colonies to the south, and how many local birds had dispersed northward and inland earlier in the season. Only 23 Glossy Ibis nests were found in 1969 and 685 came in to roost on 27 July 1969. No White Ibis (*Eudocimus albus*) nests have ever been found at this colony but 166 (all but three were immature birds) roosted here in late July 1969. The northernmost nesting colony of White Ibises along the Atlantic seaboard is Battery Island, near Southport, N.C. (Adams, 1963). As many as 2,000 were counted at Battery Island in 1968 by Parnell (1968). This influx of non-breeders was an extraordinary example of post-breeding dispersal from southern heronries.

REPRODUCTIVE SUCCESS

Reproductive success at Alligator Bay was high all three years of this study. No storms of any significance occurred during the three breeding seasons, and relatively few

dead young were found on the ground under the nests as compared to the severe 1967 season (Grant, 1967).

BILL COLOR IN YOUNG CATTLE EGRETS

On 8 and 15 September 1968 I studied 12 black-billed immature Cattle Egrets at Alligator Bay. These young were capable of short flights. Palmer (1962) states that most of the bill of the Cattle Egret is a "grayed yellow lime" and that the bill becomes "chrome yellow" in the Basic I plumage acquired between late summer and winter. The only North American literature reference found describing the black bill color was by Quay and Adams (1956), who noted that young Cattle Egrets at Battery Island had "uniformly darkish bills." William Post and I visited the Alligator Bay colony on 27 July 1969 and banded four young Cattle Egrets. In one nest, a black-billed young and a yellow-billed young (both about two weeks old) were banded. The other two young were from separate nests and both had black bills. One chick was about 10 days old and the other was about four weeks old. Several other young with black and yellow bills were observed, and I photographed both types. I returned to Alligator Bay on 1 September 1969 and found 12 young (between one and four weeks old), all with black bills. On 27 July 1970 I counted three (10.3%) yellow-billed and 26 black-billed Cattle Egret nestlings (all between two and four weeks old). William Post (pers. com.) banded 49 Cattle Egrets in the Springfield colony in South Carolina on 20 July 1969 (Post, 1970). The bills of most of these were blackish-gray with yellow tips and edges. Post also took detailed color photographs of the soft parts of these young Cattle Egrets and collected two specimens. Post examined one young (five to seven days old) on 21 July 1969 with an entirely yellow bill and noted some birds retain black bills until almost fledged. Some young retain the black bill color at least until late fall. Thomas L. Quay and Robert J. Hader (pers. com.) studied a black-billed Cattle Egret in a group of six at Lake Mattamuskeet, N.C., on 9 November 1969.

These above notes are consistent with Blaker's (1969, p. 122) findings in South African Cattle Egrets. He found that newly hatched young have "pale flesh- or horn-coloured beaks and lores. From about five days onwards the beak begins to darken until it becomes almost completely black at 10 to 15 days, and from about the 30th day onward it begins to turn paler again until it reaches the normal adult yellow colour at two to three months." He found an estimated 2% to 5% of the young do not go through this black-billed stage but change from flesh color to yellow. Blaker concludes that this color change to black bills in young Cattle Egrets evolved to prevent the nestlings from inflicting injury by attempting to eat each other. He (p. 124) believes the "chicks' beaks act as suboptimal releasers of feeding behaviour" and suggests that the lack of a black-billed stage may be "due to a recessive factor" (Blaker, 1969, p. 124).

SUMMARY

The Alligator Bay heronry near Sneads Ferry, N.C., was studied during the 1968, 1969, and 1970 breeding seasons. The islands that make up the colony are in various vegetational stages, and bird distribution is changing with plant growth. A total of 523 nests were found in 1969, but this decreased to 369 nests in 1970 due to the dying of many trees that supported nests previously. Nesting chronology and social dominance patterns are discussed in relation to the increased competition for nest sites in 1970. Young Cattle Egrets with black bills were studied, and notes are included on this vaguely known subject.

ACKNOWLEDGMENTS

I am indebted to T.L. Quay for his help throughout the study and to W. Post for several stimulating discussions and suggestions concerning this paper.

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Route 1, Box 563, Sneads Ferry, N.C., 10 September 1970.



BIRD WATCHERS'

Roundtable

Birding Around Cherokee, N.C.

H. DOUGLAS PRATT

Cherokee, N.C., in the heart of the Qualla Indian Reservation, is the center of one of the best birding areas in western North Carolina. From this point one can reach the best spots for birds in the southeastern half of the Great Smoky Mountains National Park and along the southern end of the Blue Ridge Parkway. These two units of the National Park System are sanctuaries for all wildlife and provide a spectacular altitudinal cross-section of eastern North America within relatively short distances.

One of the best places to observe birds of low and middle altitudes is the Oconaluftee area, also known as the Floyd-Enloe Bottoms. This area can be reached by driving into the park from Cherokee on Highway 441 (Newfound Gap Road). Just inside the park boundary is a large hayfield where in early summer one can expect Eastern Meadowlarks, Red-winged Blackbirds, Eastern Bluebirds, Barn Swallows, and Common Crows. Inspection of the wooded edges of the fields will reveal a large variety of small songbirds. These will include such warblers as the Black-and-white, Parula, Yellow, Yellow-throated, and Ovenbird. The visitor should stop at the Pioneer Museum on the right for a copy of the park check-list of birds and a map of the area.

Continuing into the park from the museum, turn right at the first opportunity. This will take you into the Park Service Quarters area. Many of the same species mentioned earlier will be here, plus some others. You will cross the Oconaluftee River where Belted Kingfishers are commonly seen. Also to be looked for are Turkey Vulture, Eastern Wood Pewee, Song Sparrow, Yellow-throated and Red-eyed Vireos, Scarlet Tanager, American Goldfinch, and Cedar Waxwing.

The Newfound Gap Road continues across the park to the Tennessee side. The state line runs along the ridge that includes two high altitude areas of interest to birders. Take the Clingman's Dome Road, turning left off the Newfound Gap Road. This 9-mile drive takes one to the parking area from which it is possible to climb to the lookout tower on top of the mountain. This trail, however, is not recommended for birding in the summer because it is overrun with great flocks of *Homo sapiens*. However, some of the side trails are profitable, especially early in the morning before the crowds arrive. These include a

loop trail that begins at the parking area and ties in with the Appalachian Trail along the crest of Clingman's Dome. Here one may expect to find Winter Wrens, Red-breasted Nuthatches, Black-capped Chickadees, Chestnut-sided Warblers, Canada Warblers, Blackburnian Warblers, Golden-crowned Kinglets, and sometimes Red Crossbills and Olive-sided Flycatchers.

Returning to the main highway, the birder will be only a short distance from Newfound Gap. At the Gap is another parking area from which one may hike on portions of the Appalachian Trail. The species mentioned for Clingman's Dome will also be found here. Of course, there are many lesser areas along these roads where one may stop and bird watch. Always keep in mind, however, that there are thousands of other drivers on the highway any day during the summer and pull off the road for safety. Actually, the best places for birds are the edges around overlooks anyway.

Another area of interest close to Cherokee is the short section of Big Cove Road that passes through the park. It traverses a variety of habitats close to Raven Fork, a beautiful clear stream. To reach the road, follow the brown and yellow sign that reads "Big Cove Road Campgrounds," located at the park boundary on US 441. Along Big Cove Road in the weedy and brushy fields may be found the following species: Broad-winged Hawk, Yellow-breasted Chat, Yellowthroat, Cardinal, Wood Thrush, Great Crested Flycatcher, and Golden-winged Warbler. One of the best spots for the Golden-wing is the area where the Blue Ridge Parkway crosses over Big Cove Road.

Perhaps the best single drive available for birders in this area begins at the southern terminus of the Blue Ridge Parkway. From here one can drive up the parkway to the Heintooga Road. It is a left turn marked by a sign about 8 miles above the starting point.

Heintooga Road goes up Balsam Mountain to a campground and picnic area. Birders should not hurry through this area. Any of the overlooks will prove rewarding, especially early in the morning. At lower altitudes, you will see the same species mentioned for Oconaluftee, but as the road ascends, new species will become noticeable. At the Ballhooter Scar Overlook, one should listen for the dry buzzing song of the Worm-eating Warbler. At the Jenkins Ridge Overlook you will find Rose-breasted Grosbeaks, Yellow-bellied Sapsuckers, Scarlet Tanagers, Red-tailed Hawks, and Least Flycatchers. Anywhere above 3,000 feet in elevation, juncos will be common, and at almost all elevations the song of the Chestnut-sided Warbler will be heard constantly through July.

An excellent stop on the Heintooga Road is Black Camp Gap, where you will find Field Sparrows, Least Flycatchers, Solitary Vireos, towhees, and Ruby-throated Hummingbirds. Anywhere along this road is a good spot for the Common Raven. At Heintooga, you should look for the same species as those mentioned for Clingman's Dome.

To return to Cherokee from Heintooga, one may either retrace his path down the parkway or take the Round Bottom Road. This road is gravel, built on the bed of an old logging railroad. It is usually in excellent condition. It is a fine forest drive and many species not easily seen elsewhere will usually turn up along the way. These include Cooper's Hawk, Barred Owl, and Ruffed Grouse. The Round Bottom Road is one-way down, so it is impossible to follow it without going to Heintooga.

Anyone planning to visit the Cherokee area or the Smoky Mountains in general should be aware of the great altitudinal variation in the bird life. Birds on top of Clingman's Dome or Balsam Mountain will be like those of southern Canada, while those in the valleys will more nearly resemble those of piedmont North Carolina. Another thing to keep in mind is that birds are more likely to be seen in edges such as around overlooks than in dense virgin forests. The spectacular forests of the Smokies often give the impression of being devoid of birds, which, of course, is not the case at all. The Cherokee area is well worth a visit, and may be just the place for some Southerners to add northern birds to their life lists, and vice versa.

Museum of Zoology, Louisiana State University, Baton Rouge, La. 70803

Carolina Birds and Birders

. . . with Willie Morrison

Wintering Baltimore Orioles

"Banding Studies of Wintering Baltimore Orioles in North Carolina, 1963-1966" is the title of an article by John E. Erickson appearing in the July 1969 issue of *Bird-Banding* (40:181-198), the journal of Northeastern Bird Banding Association. John conducted the research on wintering orioles while he was a student at North Carolina State University, and the paper is a condensation of the thesis he submitted as partial fulfillment of requirements for a Master of Science degree. The work was done under the direction of Thomas L. Quay. After leaving State, Erickson attended the University of Washington to obtain his doctorate in zoology.

The Baltimore Oriole, a tropical-wintering species, was found by Dr. Quay to be present in winter in increasingly large numbers in the Atlantic coast regions, particularly in North Carolina (Quay, 1968, *Wintering Baltimore Orioles in the Atlantic and Gulf States, in manuscript*). John decided, with Dr. Quay's supervision, to undertake a three-year banding study of this wintering species, using the serially numbered U S Fish and Wildlife Service aluminum bands and various combinations of six colors of plastic bands coded for visual identification. This program of study for the winters of 1963-1964, 1964-1965, and 1965-1966 would clarify the relative numbers of those wintering in the urban and suburban areas of cities and towns in the lower piedmont and upper coastal plain within a radius of about 60 highway miles of Raleigh, N.C., hopefully contributing to the general knowledge of its status in the eastern United States in winter.

Cooperators were selected in eight locations to assist in trapping, banding, observation, and recording of data throughout the study. They were to determine relative numbers, rates of return to sites of banding, estimates of population size, sex ratios, extent of local movements, and general behavior.

Dr. Quay's records of wintering Baltimore Orioles show that all came from urban and suburban areas and have always been in association with feeding stations. Including Quay's Raleigh records kept prior to 1963-1964, Erickson and his cooperators banded 394, with 99 (25.1%) returning to banding stations. This unusually high percentage of returns indicates that Baltimore Orioles have become sufficiently common and regularly widespread in localities throughout the region to be classified as regular winter visitors.

Factors that have been favorable to the survival of these tropical-wintering birds have been found by this study to be the age distribution of the individuals, food supply, and habitat. This winter population consists of both adult and first winter birds. Being out of their natural tropical winter habitat removes them from their natural winter predators,

but it also exposes them to new predators and the rigors of temperate winters. However, the winter population in North Carolina remained fairly stable and the species appears to have become well adapted to the cold winter climate.

The primary factor for survival seems to be the availability of proper food in sufficient amounts at numerous feeding stations in urban and suburban areas as no Baltimore Orioles have ever been observed in winter at any great distance from such feeding stations for any length of time. Flocks circulated in fixed patterns among several feeding stations, centering during cold weather around a few key feeding stations where sufficient food could be obtained. In warmer weather a larger number of orioles circulated among more feeders and fed fewer times at each. Small numbers of marked birds appeared as groups at several different feeding stations during the course of a day, representing only about 10% to 30% of the total number in a given flock. The small flocks consisted of three to five birds or more, always appearing at a feeder within a few seconds of one another, seemingly traveling together for the whole winter. Not all individuals were associated with fixed flocks. Loners came to feed as often as every 20 to 25 minutes or less, while the groups fed at intervals of 45 minutes to 2 hours or more.

A secondary factor in survival seems to be that the habitat of winter appears to be the yards in which the vegetation most closely approximates the forest edge. Evergreen shrubs and trees give the yards a park-like appearance comparable to the normal winter habitat of Baltimore Orioles in Mexico, Central and South America. Such shrubs as camellias, azaleas, nandinas, ligustrums, and magnolias are in greatest abundance in the eastern states. Conversely, with fewer trees and shrubs, there will be found fewer birds of this species.

Several theories were discussed as to why such large numbers of the orioles have become acclimated to form a winter population. Erickson attributes this behavior to a combination of the following: 1) some evolutionary change affecting either the behavioral mechanisms involved in migration or the immediate physiological basis for migration; 2) learning and social facilitation following the first appearance of the species in winter with the numbers gradually increasing to present levels; and 3) a change in the general climate over the eastern United States in which 1948-1949 marked a peak in a cycle of warm winters that culminated about 1952 with temperatures 4 to 10 degrees above normal. Then by the process of learning and social facilitation more and more Baltimore Orioles continued to remain longer and longer each year until the wintering habit became firmly fixed in the behavioral pattern of the species.

John expressed his sincere appreciation and thanks to his cooperators who contributed much time and effort to the banding and field-observation segments of his study: Mrs. L. H. Davis, Mrs. D. H. Fuller, Miss Fannie Gorham, Mrs. Roscoe Hauser, Mrs. R. P. Holmes, Mrs. Ernest Jeffreys, Mrs. Sarah Jordan, Mrs. J. B. Peacock, Mr. and Mrs. E. C. Speight, Dr. and Mrs. R. P. Teulings, Mrs. J. N. Walker, Mr. Byron Williams, and Mr. and Mrs. E. W. Winkler.—WMM

CBC President is Busy Birder

Appearing each week in the *Sumter Daily Item* is a column called "Flight Feathers," written by Evelyn Dabbs. "I try to write timely articles on some phase of birding and our editor has been grand about publishing them on schedule. Also, Mrs. Annie Rivers Faver and I have been doing an irregular television series on birds," she reports. "With two or three good friends I go birding as frequently as possible. We try to make coastal trips at least once a month to study the shore and marsh birds." Mrs. Dabbs has also recently contributed instructions for finding the Red-cockaded Woodpecker around Sumter to *Birding*, the journal of the American Birding Association.

"Like lacey wind the ibis fly."

We left the dock just after dawn on a cool, mid-April morning that gave promise of a warm afternoon. We went against a rising tide, hoping when we reached the small island

in the middle of Muddy Bay we could get the boat close enough to go ashore. This island is a heronry for more than 60,000 birds. There are White Ibis, Wood Ibis, herons, and egrets. Walking on this island is an unforgettable experience.

The tide was still too low, so we went down to the ocean thru Jones Creek. The water changes abruptly from muddy, opaque brown to gray-green crystal with spray like flying diamonds. Always a Belted Kingfisher waits in some scrub-oaks and flies ahead of the boat. Called "halcyon, halcyon" by the ancient Romans, he is a good-luck symbol for us. I have seen him catch a small fish in the water ahead of the boat and swallow it with a tremendous wriggling. Is it the fish giving him a final fit, or is it the kingfisher's ecstatic appetite?

We reached North Inlet and threaded our way carefully through the ever-changing shoals and oyster beds. The tide was now high enough to go back to Muddy Bay through Town Creek. We ran the boat up into the mud and jumped off, sinking 6 inches in the ooze. Plopping forward, we reached higher ground. The smell is overpowering—wet feathers and bird dung. The nests are everywhere, great flat plates of twigs in every bush and small tree, as well as on the ground. Egg shells and dead birds are strewn all over the ground. Some nests have shells in them; others carry fledglings, some still wet and struggling, others cheeping for food.

The adult birds fly up in front of us and come down right behind us as though we were walking through a curtain of live birds. The noise is deafening and ceaseless. Plunging through the bushes is slow, hot work. We do not want to disturb any nest, but it is hard to avoid the tough twigs and branches which are so completely entwined as to be almost impenetrable.

In spite of the heat, the smell, the scratching branches, the mud, it is an exciting experience. We learn from two men who are banding the young birds that the heronry must be above high tide, but small enough to give no shelter or support to predatory animals.

Enclosed are some lines jotted down in the boat as we came home that beautiful day.

Like wind-whipped lace against the sky,
Like lacey wind the ibis fly.
A chiffon strand across my eye,
The white wood ibis lazes by.
A flutt'ring movement like a sigh,
A dainty tracing without cry,
A gauzy whisper low and high,
The white wood ibis laces by.

RUTH H. HAZZARD (Mrs. W. B.)
1004 Highmarket, Georgetown, S.C.

Terres Receives Burroughs Medal

John K. Terres has been unanimously selected to receive the John Burroughs Medal for 1971. While the award was made specifically for his book *From Laurel Hill to Siler's Bog: The Walking Adventures of a Naturalist*, it is also a tribute to Mr. Terres' outstanding career as an editor, author, and spokesman for conservation of natural resources. CBC members should be particularly pleased that the award honors a book based on Mr. Terres' field trips while he was a resident of Chapel Hill, N.C.

Begun in 1926 and given only in a year when a book really deserves recognition, the John Burroughs Medal has in the past honored writers like Edwin Way Teal, Rachel Carson, Roger Tory Peterson, Archibald Rutledge, Ernest Thompson Seton, and Joseph Wood Krutch. Congratulations to John K. Terres. May your contributions to the literature of natural history continue to add luster to the Burroughs Medal for many, many years to come.

(Continued on Page 37)



Conservation

. . . with Marie Mellinger

Threat to the Santee-Cooper

Another threat to South Carolina's few remaining wilderness areas came with a proposal to log the Santee-Cooper Swamp. This swamp comprises a unique ecological community of cypress and tupelo. Conservationists responded to this with a deluge of letters to senators and representatives, and a joint resolution was introduced and passed stopping timber cutting for one year so that a comprehensive study of the ecological effects of timber cutting could be made. The Charleston Natural History Society revealed another threat to the Santee National Wildlife Refuge. Because of joint state and federal land ownership the Refuge is threatened by proposed plans for a massive recreation development favoring people over wildlife. This would completely destroy the value of the Refuge as a wildlife sanctuary.

Rare and Endangered Species

In 1964, 78 species of wild life were listed as rare and endangered in the United States. By 1967 the list had grown to 139 species, and by 1971, latest reports list 418 species. These lists do not include the big game animals and other wild life endangered in Africa, Asia, South America, and other parts of the world. Every day we read a press release or an editorial suggesting still another species becoming rare or endangered. The Peregrine Falcon, the Red-shouldered Hawk, the Red-tailed Hawk (said to have decreased in numbers by 70% in some areas), the Prairie Chicken, the meadow vole, the Herring Gull, all joining the eagle, the Osprey, the timber wolf, and the alligator, on the road to extinction. On 24 November 1970 Secretary Hickel added eight more species of whales to this list.

Why? There are basically many reasons all attributed directly or indirectly to man—pesticides, chemical pollution, oil pollution, sewage and waste pollution, loss of

(Continued on Page 35)

CHRISTMAS BIRD COUNT-1970	COAST			COASTAL PLAIN					PIEDMONT							MTN.									
	Boide-Pea Island, N.C. 30 December	Wilmington, N.C. 2 January	Charleston, S.C. 27 December	Hilton Head Island, S.C. 30 December	Beaufort Co., N.C. 3 January	Pamlico Co., N.C. 27 December	Rocky Mount, N.C. 3 January	Southern Pines, N.C. 22 December	Dillon, S. C. 26 December	Columbia, S.C. 28 December	Aiken, S.C. 3 January	Henderson, N.C. 29 December	Raleigh, N.C. 23 December	Chapel Hill, N. C. 1 January	Greensboro, N.C. 2 January		Winston-Salem, N.C. 2 January	Stanly Co., N.C. 2 January	Charlotte, N. C. 2 January	Greenville, S.C. 1 January	Elkin-Ronda, N.C. 26 December	North Wilkesboro, N.C. 28 December	Caldwell Co., N.C. 31 December	Buncombe Co., N.C. 2 January	Great Smoky Mtn. Natl. Park - 3 January
Common Loon	227	90	53	7	74	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	1	—	—	—
Red-throated Loon	166	35	106	13	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Red-necked Grebe	1	—	—	—	1	—	—	—	—	—	—	—	—	31	—	13	*	—	—	1	—	—	—	—	—
Horned Grebe	513	49	35	228	148	4	—	—	—	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—
Western Grebe	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pied-billed Grebe	368	72	47	51	29	32	13	3	12	2	7	3	3	60	11	14	5	2	2	—	—	—	—	—	—
Greater Shearwater	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Brown Pelican	185	—	20	77	88	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Gannet	1,461	1,383	14	60	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	*
Great Cormorant	1	1	—	—	79	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Double-cr. Cormorant	1,436	7	1,225	125	79	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Anhinga	3	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Great Blue Heron	243	21	41	77	40	4	1	3	2	1	1	2	2	15	14	4	11	1	1	—	2	—	—	—	—
Green Heron	5	—	2	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Little Blue Heron	36	3	1	20	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Common Egret	177	6	61	70	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Snowy Egret	67	7	26	14	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Louisiana Heron	51	13	10	16	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Black-cr. Night Heron	53	37	15	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Yellow-cr. Night Heron	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
American Bittern	14	7	4	1	1	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—
Wood Ibis	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Glossy Ibis	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
White Ibis	60	—	53	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Whistling Swan	324	317	—	1	—	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Canada Goose	1,875	1,000	28	21	100	—	—	—	—	—	—	6	35	—	4	356	—	60	10	—	255	—	—	—	—
Snow Goose	4,750	4,750	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Blue Goose	18	18	—	—	—	158	—	5	39	22	8	46	—	—	16	220	545	36	7	12	95	—	—	—	—
Mallard	2,685	126	1,020	186	21	—	—	—	—	—	—	—	—	110	6	220	545	36	7	12	95	—	—	—	—
Black Duck	1,141	533	134	129	11	43	—	—	19	—	—	—	6	2	77	153	7	16	—	—	14	—	—	—	—
Gadwall	591	394	58	32	38	—	—	—	—	—	—	—	43	1	8	1	—	—	—	—	—	—	—	—	—
Pintail	1,786	1,086	200	500	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Common Teal	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Green-winged Teal	2,617	1,723	17	802	5	—	—	1	—	—	—	—	46	—	—	—	1	1	22	—	—	—	—	—	—
Blue-winged Teal	74	2	30	40	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
American Widgeon	2,604	645	15	1,798	50	2	—	—	—	—	—	—	30	—	15	1	1	2	46	—	6	—	—	—	—
Shoveler	1,158	392	4	750	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Wood Duck	452	—	70	256	4	18	—	4	20	—	—	—	—	14	16	10	5	15	4	—	—	—	—	—	—
Redhead	3,626	3,600	1	4	—	—	—	—	—	—	—	—	—	8	11	2	9	4	—	—	—	—	—	—	—
Ring-necked Duck	1,393	213	9	130	—	31	—	—	39	—	2	98	—	480	60	284	9	38	—	—	—	—	—	—	—
Canvasback	1,124	750	30	300	*	23	5	—	—	—	—	—	3	—	8	2	2	3	—	—	—	—	—	—	—
Greater Scaup	19	7	12	—	—	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Lesser Scaup	1,535	1,200	3	—	295	—	—	—	5	—	—	—	—	13	—	10	*	—	2	1	—	—	—	—	—

[illegible]

CHRISTMAS BIRD COUNT-1970	COAST			COASTAL PLAIN								PIEDMONT										MTN.			
	30 December	Wilmington, N.C. 2 January	Charleston, S.C. 27 December	Hilton Head Island, S.C. 30 December	Beaufort Co., N.C. 3 January	Pamlico Co., N.C. 27 December	Rocky Mount, N.C. 3 January	Southern Pines, N.C. 22 December	Dillon, S. C. 26 December	Columbia, S.C. 28 December	Aiken, S.C. 3 January	Henderson, N.C. 29 December	Raleigh, N.C. 23 December	Chapel Hill, N.C. 1 January	Greensboro, N.C. 2 January	Winston-Salem, N.C. 2 January	Stanly Co., N.C. 2 January	Charlotte, N.C. 2 January	Greenville, S.C. 1 January	Elkin-Ronda, N.C. 26 December	North Wilkesboro, N.C. 28 December		Caldwell Co., N.C. 31 December	Buncombe Co., N.C. 2 January	Great Smoky Mtn. Natl. Park - 3 January
Western Sandpiper-----	7	25	315	64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Marbled Godwit-----	19	5	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sanderling-----	246	55	52	133	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
American Avocet-----	47	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Great Black-backed Gull-----	302	21	1	352	27	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Herring Gull-----	4,861	1,219	637	71	32	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--
Ring-billed Gull-----	5,101	966	1,092	146	1,019	33	1	--	--	15	--	151	--	3	7	1	286	--	--	--	--	--	--	--	--
Laughing Gull-----	34	3	13	26	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bonaparte's Gull-----	16	54	331	16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Black-legged Kittiwake-----	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Foster's Tern-----	44	27	165	14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Common Tern-----	3	--	1	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Royal Tern-----	84	70	1	12	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Clayton's Tern-----	3	--	6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Black Skimmer-----	17	65	150	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dovekie-----	218	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Rock Dove-----	1	271	--	--	42	--	--	--	--	21	18	32	524	31	155	50	39	53	4	12	12	5	36	--	--
Mourning Dove-----	1,380	80	44	75	497	118	7	33	139	67	19	13	602	88	211	347	212	237	10	141	90	70	254	198	--
Ground Dove-----	3,580	--	5	31	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Barn Owl-----	7	1	--	--	--	--	--	--	--	--	1	--	--	1	*	3	--	3	--	--	2	--	--	--	--
Screech Owl-----	24	4	7	1	--	2	--	--	--	--	1	--	--	1	--	2	--	3	--	--	--	--	1	1	--
Great Horned Owl-----	18	3	1	1	--	--	--	--	--	--	3	--	2	2	*	3	1	5	--	--	*	--	1	1	--
Barred Owl-----	16	1	4	1	--	--	--	--	--	--	1	--	--	2	--	--	--	--	--	--	--	--	--	--	--
Long-eared Owl-----	*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Short-eared Owl-----	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Belted Kingfisher-----	228	23	29	56	40	5	4	2	3	6	7	12	6	7	12	6	5	5	1	3	--	--	4	10	--
Yellow-shafted Flicker-----	1,320	119	184	257	190	54	19	12	66	16	20	9	69	36	41	57	69	52	2	9	1	2	2	18	--
Pileated Woodpecker-----	114	4	25	9	1	1	1	1	8	2	8	--	--	5	1	2	1	--	--	--	--	3	20	--	--
Red-bellied Woodpecker-----	674	14	20	77	86	40	2	6	31	4	5	19	14	39	58	60	47	30	78	3	7	8	4	21	--
Red-headed Woodpecker-----	109	1	1	1	19	9	--	1	6	--	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Yellow-bellied Sapsucker-----	327	2	18	43	35	9	--	5	19	8	5	15	7	13	25	21	29	18	26	2	11	2	2	12	--
Hairy Woodpecker-----	427	1	4	9	14	2	6	20	2	3	3	11	6	5	24	11	9	7	4	1	5	2	8	14	--
Downy Woodpecker-----	122	5	7	39	22	3	--	1	6	--	5	--	--	--	--	--	--	--	--	--	--	--	3	9	64
Red-cockaded Woodpecker-----	36	4	24	--	3	--	--	3	--	*	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Eastern Kingbird-----	1	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Great Crested Flycatcher-----	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Eastern Phoebe-----	115	1	8	24	26	2	5	3	4	3	1	8	4	3	--	1	3	6	2	2	--	--	4	8	--
Horned Lark-----	343	--	--	--	350	--	5	5	31	--	--	--	--	26	77	19	151	34	--	--	--	--	--	--	--
Tree Swallow-----	407	57	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Blue Jay-----	2,696	193	141	258	149	9	27	67	67	23	43	52	320	117	249	103	311	315	18	59	6	52	28	106	--
Common Raven-----	12	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	--
Common Crow-----	2,165	26	17	81	143	40	16	8	8	--	18	48	74	46	154	98	218	209	10	312	83	1	273	311	--
Fish Crow-----	447	150	62	191	4	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

[illegible]

CHRISTMAS BIRD COUNT-1970	COAST			COASTAL PLAIN						PIEDMONT										MTN.				
	Bodie-Pea Island, N.C. 30 December	Wilmington, N.C. 2 January	Charleston, S.C. 27 December	Hilton Head Island, S.C. 30 December	Beaufort Co., N.C. 3 January	Pamlico Co., N.C. 27 December	Rocky Mount, N.C. 3 January	Southern Pines, N.C. 22 December	Dillon, S.C. 26 December	Columbia, S.C. 28 December	Alcon, S.C. 3 January	Henderson, N.C. 29 December	Raleigh, N.C. 23 December	Chapel Hill, N.C. 1 January	Greensboro, N.C. 2 January	Winston-Salem, N.C. 2 January	Stanly Co., N.C. 2 January	Charlotte, N.C. 2 January	Greenville, S.C. 1 January	Elkin-Ronda, N.C. 26 December	North Wilkesboro, N.C. 28 December	Caldwell Co., N.C. 31 December	Buncombe Co., N.C. 2 January	Great Smoky Mtn. Natl. Park - 3 January
Purple Finch -----	370	5	---	---	4	---	9	8	5	---	6	2	43	79	21	24	92	45	---	2	1	4	17	3
House Finch -----	60	---	---	---	3	---	3	---	---	---	---	7	1	2	22	21	*	1	---	---	---	---	---	---
Pine Siskin -----	69	---	2	15	2	---	---	---	---	---	---	---	15	4	18	1	*	---	12	---	---	---	---	---
American Goldfinch -----	1,327	48	43	56	8	---	37	41	4	103	73	---	65	137	63	161	101	62	---	66	---	---	30	223
Red Crossbill -----	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Rufous-sided Towhee -----	2,004	200	160	207	43	16	14	51	14	31	48	29	126	105	97	68	259	210	2	29	8	62	22	70
Ipswich Sparrow -----	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Savannah Sparrow -----	722	38	74	79	24	23	12	27	20	51	25	---	36	20	---	3	4	17	---	---	---	---	---	---
Grasshopper Sparrow -----	6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sharp-tailed Sparrow -----	107	96	5	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Seaside Sparrow -----	52	49	---	*	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Vesper Sparrow -----	258	*	40	104	---	---	---	6	70	---	24	---	6	---	---	3	---	---	---	---	---	---	---	---
Lark Sparrow -----	*	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Bachman's Sparrow -----	2	---	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Slate-colored Junco -----	6,995	1	93	148	113	367	56	417	137	232	68	121	551	621	1,007	483	736	441	60	218	58	146	147	483
Chipping Sparrow -----	544	30	60	174	15	30	63	30	12	3	30	27	6	1	9	21	---	---	---	---	---	---	---	---
Field Sparrow -----	2,194	30	45	96	199	12	35	52	116	63	71	120	20	73	280	58	206	90	285	30	77	10	14	50
White-crowned Sparrow -----	52	---	---	---	---	---	---	---	---	---	---	---	5	---	20	3	9	---	---	---	---	---	---	---
White-throated Sparrow -----	6,068	36	357	296	673	163	25	70	145	98	221	117	156	441	739	303	475	345	311	5	263	53	248	28
Fox Sparrow -----	408	9	98	18	11	10	*	23	58	3	5	8	7	3	45	1	2	66	---	---	---	---	---	---
Lincoln's Sparrow -----	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Swamp Sparrow -----	1,262	269	509	162	62	10	---	42	14	---	17	---	61	72	6	2	1	5	---	---	---	---	---	---
Song Sparrow -----	2,333	220	108	130	87	37	3	35	188	45	31	58	2	137	312	95	138	93	157	---	63	16	22	75
Snow Bunting -----	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Total number species -----	217	151	156	143	86	52	64	78	60	60	75	52	82	81	82	85	80	77	41	60	32	37	54	58
Total number individuals -----	255,137	41,397	16,193	38,469	8,609	1,960	4,645	6,628	1,428	3,803	23,267	1,566	9,135	6,364	8,344	5,933	11,052	39,516	354	2,735	611	1,301	2,173	5,011
Field observers -----	366	22	18	21	8	3	4	6	3	9	8	6	14	13	27	23	24	23	8	16	1	0	7	52
Yard observers -----	122	0	0	0	10	0	5	3	2	0	0	3	16	5	2	6	37	1	1	3	0	23	2	1
Field parties -----	134	7	6	9	13	3	1	3	1	3	5	2	6	8	9	10	10	10	3	3	1	0	3	17
Party-hours -----	1069.5	70	56	78	105	24	10	33	10	19	38	8	60	54	83	84	98	56	8	9	10.5	---	32	114
Party-miles -----	3663.5	156	301	302	466	18	79	64	160	43	151	191	25	178	112	222	432	136	315.5	60	95	22	---	135

* Seen in count area during count period but not on count day.

CHRISTMAS BIRD COUNT — 1970

ELOISE F. POTTER

The 1970 Christmas Bird Count in the Carolinas was another record breaker. The total number of species reached a new high of 217, and three count areas listed more than 150 species. Charleston and Wilmington tied for first place with 156 species, and Bodie-Pea Island listed 151. Outstanding inland counts came from Beaufort County, N.C. (86 species) and Winston-Salem (85). Charlotte reported the best winter list in 28 years, and Elkin-Ronda had the best count since 1953.

The total of 217 species is actually only one better than 215 (not including Rock Doves) tallied in 1965. Wilmington's local record of 164 species set in 1961 still stands. The total number of individuals (255,137) doesn't begin to approach the more than 3 million birds counted in 1963 when the huge blackbird roost was at Greensboro.

Snow kept the Caldwell County, N.C., participants mostly in their own yards and somewhat restricted coverage in other upper piedmont and mountain areas; but elsewhere the weather was not particularly unpleasant for the time of year.

The present count probably sets a new record for rare species and common ones found out of season in the Carolinas. An immature Great Cormorant seen by two parties at Bodie-Pea Island is the first known sight record for North Carolina. Birders in the same count area also found a Greater Shearwater, Common Teal, Yellow Rail, and Black-legged Kittiwake. Wilmington recorded the Western Grebe and Hilton Head the Red-necked Grebe.

Hawk totals are surprisingly good. More Red-tailed, Marsh, and Pigeon Hawks were found than at any other time in a decade or longer. Peregrine Falcons appeared at Rocky Mount and Hilton Head; Broad-winged Hawks turned up at Charleston, Pamlico County, and Caldwell County; and Rough-legged Hawks were seen in Pamlico County, Rocky Mount, and Stanly County.

Passerine stragglers were truly notable: Eastern Kingbird (Dillon, Buncombe County), Great Crested Flycatcher (Hilton Head), Wood Thrush (Charleston, Beaufort County), Swainson's Thrush (Winston-Salem), Black-and-white Warbler (Hilton Head, Beaufort County), Prothonotary Warbler (Beaufort County), Parula Warbler (Hilton Head), Blackburnian Warbler (Hilton Head), Yellow-throated Warbler (Wilmington, Hilton Head, Beaufort County), Prairie Warbler (Charleston), American Redstart (Hilton Head), Blue Grosbeak (Southern Pines), Painted Bunting (Southern Pines during count period), and Lark Sparrow (Hilton Head during count period).

Evening Grosbeaks visited five of the 24 areas during the count period, and Purple Finches were noted in 18 localities. Considering the small number of northern finches tallied on the census, the sighting of a Red Crossbill in Stanly County was very unusual.

House Finches appeared in nine localities from Beaufort County in eastern North Carolina to Winston-Salem and Charlotte in the west. Greensboro listed 22 House Finches and only 21 Purple Finches, while Winston-Salem had 21 House Finches compared to 24 Purples. This introduced species, first recorded in North Carolina in November 1962 (*Chat*, 28:63), seems to be well established and rapidly spreading as a winter visitor in the southeastern United States. In January and February 1970 it was found as far south as McDonough, Georgia (*Oriole*, 35:29), approximately 800 miles SW of Long Island, N.Y., where caged birds were released 30 years ago.

COMPILERS' COMMENTS

BODIE-PEA ISLAND, N.C.: Greater Shearwater (EP, JP) was seen with 30X scope and 7 X 50 binocular in direct sunlight just beyond the breakers at a distance of about 100 yards from a vantage point on the dunes at N tip of Pea Island. Seen four times in 20 minutes, the bird was smaller than the Gannets it was with when first noticed. About the

size of a Black Skimmer, it flew on stiff wings with the slender black bill held downward. Dark above and white below, the bird had a black cap that sharply contrasted with the white cheeks and a distinctly seen white V on the rump. There is one previous North Carolina winter record from Wilmington (*Chat*, 11:11, 1947).

Great Cormorant (HDP, RH, DH) constitutes the first sight record for North Carolina. Pratt saw the immature bird flying directly overhead at 7:30 AM. Viewed with a 7X binocular for about 15 seconds, the bird had a white belly. At this time it was flying across Oregon Inlet from the ocean to Pamlico Sound. Hader and Hughes, unaware of Pratt's sighting, observed an immature Great Cormorant at 2:00 PM flying northward over the ocean parallel to the beach at a point about 6 airline miles S of Oregon Inlet. The large size and very white belly in contrast to dark upper parts were noted in excellent light at 150 to 200 yards with a 20X scope.

Glossy Ibis (PS, JW, et al.) was an adult bird. Common Teal (PS) was feeding with Green-winged Teal in shallow water on Pea Island N.W.R. Horizontal white stripe on side above wing and absence of vertical white stripe carefully noted with 30X scope. Second consecutive winter species has been in same general area. Common Eider (MB, HLJ, HDP, DS) was a brown plumaged bird at Oregon Inlet.

Yellow Rail (BW) was flushed from under foot in a brackish marsh on Bodie Island. About the size of a Sora, the bird was tawny above with white wing patches. It flew feebly with dangling legs for a short distance and disappeared under a shrub. Piping Plovers (HDP, MB, HLJ, DS) were on sand flat at southern tip of Bodie Island. Willet (MB, HLJ, HDP, DS) was also at Oregon Inlet. Short-billed Dowitchers (PS, JW, RH, DH) seen on Pea Island were identified by double call note. Marbled Godwits (MB, HLJ, HDP, DS) were on sand flats at southern tip of Bodie Island and have been in area all fall. American Avocets (3 parties) at Bodie Island by the lighthouse and at North Pond on Pea Island N.W.R. are a portion of a much larger group present in the area during the summer and fall.

Black-legged Kittiwake (JP, RT) was an adult bird carefully observed at 100 yards with 7X binoculars off the beach at northern end of Pea Island. Dovekie (EL, DEP, RHP) was seen in flight under excellent viewing conditions just offshore at southern end of Bodie Island. Dovekie remains were found at several places along the beaches in count area.

Grasshopper Sparrow (JC, HC, ET, RT) on Roanoke Island was studied carefully as it perched in open. Lincoln's Sparrow (ET) was also on Roanoke Island; observer is familiar with species.—Paul W. Sykes Jr.

WILMINGTON, N.C.: Western Grebe (HL III) was seen in good light with 30X scope at about 150 to 200 yards for about 3 minutes on the Inland Waterway at Myrtle Grove Sound. About the size of a Common Merganser, the bird had a prominent white throat and black crown, long needle bill. Red-throated Loon was present for comparison. The Western Grebe reported without comment as seen during the count period last year was found by John Irvine (see GFN this issue). Two parties saw Yellow-throated Warblers.—Frances B. Needham

CHARLESTON, S.C.: Broad-winged Hawk, Wood Thrush (NAC, AN, FHB), and Prairie Warbler (WFR, JRG) are somewhat unusual, but there are other winter records for area.—Julian R. Harrison

HILTON HEAD ISLAND, S.C.: (center: Spanish Wells Landing to include Hilton Head, Pinckney, parts of Daufuskie, Buckingham and Bluffton).

Red-necked Grebe (RW, EW, SB, DB) came to surface several times in good light at close range; large size, large bill, topknot unmistakable. Wood Ibis (VM, SM) was in flight; four had been seen during count period. Peregrine Falcon (AH, OH, et al.) was a female seen perched and chasing a crow; bird remained throughout count period. Knots (LD, BN) were studied carefully among other shorebirds; seen throughout count period at Tybee and Hilton Head. Great Crested Flycatchers (BH, HL, et al.), Parula Warblers

(HL, MF, MS), American Redstart, and Blackburnian Warbler (SB, DB) were unusual stragglers. The latter was seen in sunlight at close range; light triangle around eye, wing bars, yellowish sides, and light streaking on back all noted.—Mrs. J.G. (Beany) Newhall

BEAUFORT COUNTY, N.C.: Osprey (EB) was seen on river several times in December. Wood Thrushes, Prothonotary Warblers, Yellow-throated Warbler, and Rose-breasted Grosbeak were all close studies of feeder visitors by Ethel Barkley. House Finches (EB, GC) are new for area with as many as 10 birds present at Barkley feeder since 7 December. Blue-gray Gnatcatcher (HS) has been present all fall.—Geraldine Cox

PAMLICO COUNTY, N.C.: Broad-winged Hawk (GC et al.) was seen perched at 50 feet and in flight. Rough-legged Hawk (GC et al.) had been present for past two weeks. Common Gallinule nests in area and can be found at all seasons. Royal Tern (GC et al.) was a close observation of a sitting bird.—Geraldine Cox

ROCKY MOUNT, N.C.: Peregrine Falcon (JB, BD, LD, JLT) is unusual for this section of the state at this time of year. Rough-legged Hawk (JB, BD, LD, JLT) is rare. House Finches are present for second consecutive winter. Low water level in most ponds cut wildfowl count.—John L. Thompson

SOUTHERN PINES, N.C.: Robins were unusually numerous. Blue Grosbeak (JHC, EL, HL, RT), probably a young female, was studied closely perched in small tree; first winter record for count area. Painted Bunting first appeared at Mary Wintyen's feeders 24 December. Identity confirmed by Carter on 1 January.—J.H. Carter III

DILLON, S.C.: Eastern Kingbird (RAB) was on a power line in a residential area.—John H. Wilson.

AIKEN, S.C.: White-eyed Vireo (WP).—Gerald E. Knighton

HENDERSON, N.C.: House Finches for second consecutive year.—Mary Frances Chavasse

RALEIGH, N.C.: Rain hurt species total, especially hawks and owls. Male House Finch (EL) was one of several birds present at Rose Garden since early December. Blackbird roost at Garner disbanded by late November.—Harry E. LeGrand Jr.

CHAPEL HILL, N.C.: Species count of 81 equals record set last year. Unusual were 10 Brewer's Blackbirds (DB) and a Common Gallinule (JOP, DB). The latter, especially surprising in winter, was in shoreline brush at a large farm pond and was still present 10 days later.—James O. Pullman

GREENSBORO, N.C.: Ice and snow remaining from the storm of 31 December made ground and water conditions poor for birding even though the count day was nearly clear with light winds. The 22 House Finches were at Mrs. Garrett's feeder in the western part of the city. She had such a flock much of last winter and again earlier this winter.—Thomas E. Street

WINSTON-SALEM, N.C.: American Bittern (RS, RH, et al.) was watched at close range at edge of fresh-water marsh. Clapper Rail (RS, RH, et al.) was heard calling repeatedly from same marsh; call well known to observers and compared to song recordings. [Although the Clapper Rail is normally a bird of the salt marsh, individuals occasionally wander inland. The *AOU Check-list* gives several inland records including one from Lexington, Virginia.—ED.] Swainson's Thrush (CRH) had conspicuous eye-ring and only one leg.—C. Royce Hough

STANLY COUNTY, N.C.: Male House Finch has been at Whitlock feeders every day since 4 January 1971. Red Crossbill (RB) was N of New London.--Mrs. J.U. Whitlock

CHARLOTTE, N.C.: House Finch has been present at Norwood feeder since 23 November. Number of Red-tailed Hawks was a record for area; number Barred Owls also noteworthy; Eastern Bluebird count highest in 11 years. Two large flocks of Starlings accounted for most of total but no roost was found. Improved coverage made this the highest winter count in 28-year history.--Joseph R. Norwood

ELKIN-RONDA, N.C.: Ring-billed Gull (JT) is first appearance on Christmas count, but a few are seen most winters. Two male Brown-headed Cowbirds (OH) were at a feeder. Bluebird count was highest since 1964; total species highest since 1953.--Lin Hendren

CALDWELL COUNTY, N.C.: Broad-winged Hawk was seen by Mrs. Ainsley A. Whitman and Mrs. Murray Bruner near their home about 4 miles from Lenoir. They have seen it frequently in a wooded section and near a marshy area of Lower Creek. Although *Birds of North Carolina* lists this species as a summer resident, Fred May confirms that it does occur here in winter.--Mrs. E.M. Manchester

BUNCOMBE COUNTY, N.C.: Eastern Kingbird (MD) was at a feeder 31 December 1970. Common Snipe (GGM) was on Warren Wilson College grounds.--Robert C. Ruiz

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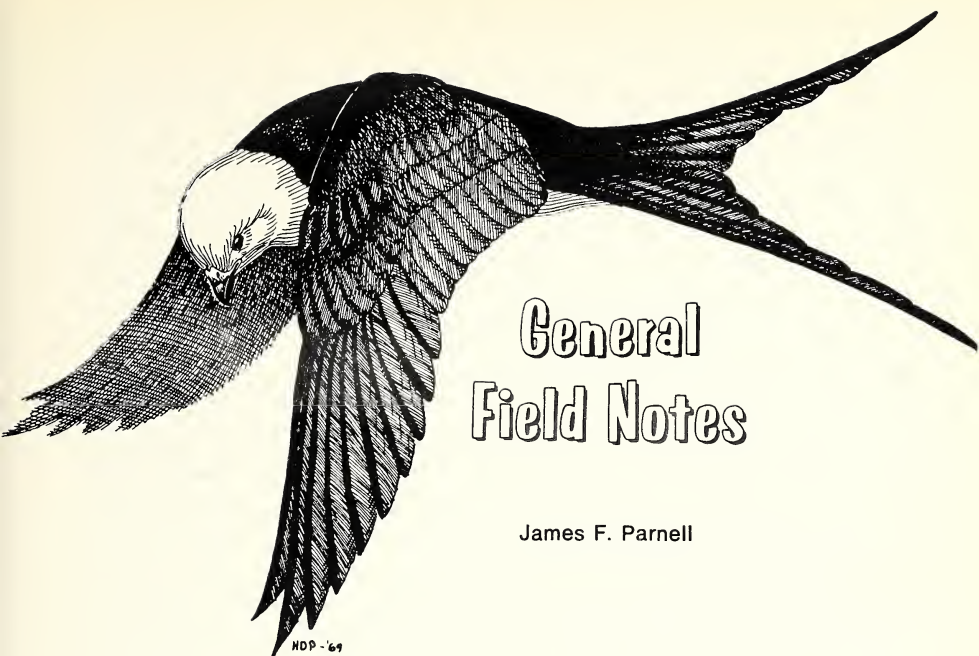
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CHRISTMAS BIRD COUNT 1971

Dates: 18 December 1971 through 2 January 1972
CBC forms will be sent to 1970 compilers about 1 December.
Reports received after 15 January 1972 will be published
in *Chat* only at the convenience of the editor.



General Field Notes

James F. Parnell

Sight Record of a Western Grebe at Carolina Beach, N.C., With Comments on its Occurrence in the Southeast

JOHN M. IRVINE JR.

23 Campbell Avenue, Woodcliff Lake, N.J. 07675

8 June 1970

On 28 December 1969, the day following the Wilmington area Christmas count, I was birding alone about 8:00 AM along the shore just north of the town of Carolina Beach. Strong northwest winds during the previous 24 hours had flattened the ocean and made the surf unusually calm. Numerous Red-throated Loons, a few Common Loons and Horned Grebes, and a flock of Bufflehead scattered along the ocean not far offshore were all feeding vigorously. The sky was clear, the sun still low but bright.

My attention was caught by a bird about the size of a Red-throated Loon but whose neck appeared to be only one-third to one-half as thick as in nearby individuals of that species. Moving down the beach a few yards to get a better angle of light, I studied the bird at leisure for about 10 minutes through 9X35 binoculars and a 20X Bushnell spotting scope. There was ample opportunity to compare the unusual individual directly with both species of loons swimming nearby and with a Horned Grebe that conveniently flew in and landed just in front of it. During this time it was approximately 60 to 100 yards offshore, and 120 to 200 yards distant from me. It dived occasionally but did not fly. The suspicion, then the certainty, dawned on me that I was observing a Western Grebe (*Aechmophorus occidentalis*).

The bird seemed slightly taller than the Red-throated Loon because it sat on the water with its neck quite erect, making the loon appear to be "hunched down." The plumage was very dark on the back and wings, the back of the neck, and the top of the head. Its throat, the front and sides of the neck, and the chest and belly were white. The

line of division between black and white on the head and neck was very sharp along its entire length, quite in contrast with the fuzzy grayish shading between light and dark areas on the necks of some of the loons nearby. When the bird swam directly away from me, the white sides of the neck, contrasting with the black stripe down the back of the neck, could be clearly seen. The black stripe was thinner along the middle of the neck than at the top or bottom. The bill was long, thin, and yellow, and the angle it made with the forehead was very abrupt, almost approaching 90 degrees. When the Horned Grebe flew in, this bird was much taller and longer-billed. I checked all these field marks against the illustration and text in Robbins, Bruun, and Zim's *A Guide to Field Identification: Birds of North America* and found no discrepancies. Compared to the other species around it, this bird gave the appearance of being in stately, formal evening dress. Its carriage as well as its rarity gave it "class." This was my first experience with the species.

When I called James Parnell to report my find, he and his house guests went immediately to Carolina Beach but could not find the bird. As I was describing the bird over the phone, Dr. Parnell asked, "Could it have been a Great Crested Grebe?" Only then did I remember reading in several places that Western Grebes seen on the East Coast might possibly be winter plumage individuals of the European species *Podiceps cristatus*. This species has never been recorded in North America. The significant difference listed by the field guides to European birds is that *P. cristatus* has a pinkish rather than a yellowish bill. The bill of the bird I saw was a clear yellow.

My curiosity was piqued by the similarity in these two species, however, so after returning to New Jersey, I began a more detailed study of the occurrences of the Western Grebe in the eastern part of the nation, visiting the American Museum of Natural History to study specimens of both species. Results of this research will be submitted for publication when the study is complete, but a summary of the salient points as regards field identification of these two species is in order here. Discrimination between them is next to impossible in the field. Examination of several score specimens of each species indicates great variation in the amount of light and dark areas on the bill. Under any but the best light conditions, "yellowish" and "pinkish" could be problematical. Pictures in the field guides that show the black on the head as extending down to the eye in one species and leaving a white line over the eye in the other are misleading; there is great variation in both species as to where the division between white and black occurs. There apparently is a longer white wing-stripe in the Western Grebe than in the Great Crested Grebe, which to judge by the pictures I could find has only a white speculum (I could not unfold the wings of the specimens to check this). There is, however, one clear distinction between these two species. The Western Grebe never has, and the Great Crested Grebe always has, white upper wing coverts, so that in flight the Great Crested Grebe would appear to have a white bar on the leading edge of the inner wing as well as a white speculum in the secondary feathers. But, as Dean Amadon of the AMNS staff put it to me when I mentioned this distinction to him, "How often do you see a grebe flying?" Since most water birds have their wings tucked under their back and shoulder feathers when at rest, this field mark would not usually be seen.

A search of the literature indicates there is only one specimen of the Western Grebe from the Carolinas, and indeed from the entire Atlantic coast: a bird taken at McClellanville, S.C., on the astonishing date of 22 June in 1936. This specimen is in the Charleston Museum (*Auk*, 53:438).

There are three previous sight records for North Carolina, the first of which was in the Wilmington area. Mrs. C.K. Bryan, now of Phoenixville, Pa., saw an individual on 29 December 1956, while on the Wilmington Christmas count, but did not turn the record in for the census because she was alone at the time and because of the rarity of her find. She was familiar with the species from previous sightings in the western states, however, and at the urging of Mrs. Cecil Appleberry the record with accompanying details was submitted to B. Rhett Chamberlain, who was then Regional Editor for *Audubon Field Notes*. Mrs. Bryan observed the bird offshore at Wrightsville Beach under good conditions (*Audubon Field Notes*, 11:255, and correspondence with Mrs. Bryan and

Mrs. Appleberry). On 30 March 1959 James Parnell and Thomas Quay found a Western Grebe on the North Pond at Pea Island National Wildlife Refuge; and Parnell and Franklin Roberts saw another on Lake Johnson just south of Raleigh on 20 December 1961 (*Chat*, 26:17f).

Two sight records are in the literature from South Carolina: two individuals were seen offshore at Ocean Drive Beach in Horry County early on 14 April 1957 by Robert Overing, William Hamnett, and B.R. Chamberlain (*Audubon Field Notes*, 11:255), and a single individual was seen at Charleston on 23 November 1966 by Norman Chamberlain (*Chat*, 31:24).

The species has been sighted three times in Virginia: at Yorktown on 4 December 1963 Frederic Scott discovered a single bird (*Raven*, 35:46f); another was seen by many observers from the Washington area at Dulles Airport from 14 to 19 October 1964 (*Raven*, 36:26f); another was far inland at Claytor Lake in Pulaski County from 24 January to 27 February 1965. This individual was found by M. Kathy Klimkiewicz and J.W. Akers and seen by several other observers (*Raven*, 36:77). This last is the only record I have been able to discover from the entire southern Appalachian mountain region. Apparently, in both northern and southern states, most individuals of this species that manage to cross the mountains push on to the coast.

Elsewhere in the southeastern states I can find only two records from Kentucky (Robert M. Mengel, *The Birds of Kentucky*, p. 154) and one from Grenada Reservoir in Mississippi (*Audubon Field Notes*, 19:385). Georgia, Alabama, and Tennessee have not yet recorded the species. There are seven records from the coasts of Florida, ranging from Jacksonville around to Pensacola, with the species reported twice from the Tampa Bay area three years apart (Alexander Sprunt Jr., *Florida Bird Life*, first published in 1954 but see the Addendum dated June 1963 in later copies; also *Audubon Field Notes*, 4:199, 9:251, 11:259, 13:149, 19:372, and 19:463). The grand total for the area south of the Potomac and Ohio Rivers and east of the Mississippi River is one specimen and 19 sightings. This is reasonable considering that the bird's general flight route lies southwestward from its breeding grounds on freshwater lakes in the western states toward the Pacific coast. Strays should be watched for, however, especially along the coast, and identification should be made with care.

Black-necked Stilts Breeding In Onslow County, N.C.

GILBERT S. GRANT

Route 1, Box 563, Sneads Ferry, N. C.

9 August 1970

Black-necked Stilts (*Himantopus mexicanus*) were found for the first time in an impoundment at West Onslow Beach, Onslow County, N.C., during the summer of 1969. At least five were observed on 21 June 1969, 14 on 22 June 1969 (*Chat*, 33:106), and as many as 15 were still present on 11 August 1969. The behavior of these birds indicated they were nesting in the vicinity, but no nests were found in 1969.

An intensive search on 31 May 1970 disclosed four nests with four eggs each and one nest with one egg in this impoundment. Ten adults feigning injury, pretending to feed, and calling loudly were counted in the vicinity of these nests on this visit. On 15 June 1970 I found that these 10 adults were still present and that all nests had apparently hatched successfully. I returned to the impoundment on 6 July 1970 and observed four half-grown young feeding near an adult. A total of 16 Black-necked Stilts were counted on this visit.

For nesting activities at Cape Hatteras National Seashore see *Chat* (21:24-25, 1957; 24:105, 1960; 25:17, 1961; 26:103, 1962; and 27:58, 1963), and for possible nesting at North River Marsh at Beaufort, N.C., see *Chat*, 27:55, 1963. At present, Cape Hatteras National Seashore and West Onslow Beach are the only North Carolina sites where nesting of the Black-necked Stilt definitely occurs.

Forster's Tern Feeding Young In Pamlico County, N.C.

MARVIN TURNAGE JR.

Route 1, Box 25, Bayboro, N.C.

26 July 1970

During much of June and early July 1970, I observed the habits of several Forster's Terns (*Sterna forsteri*) in Bay and Neuse Rivers in Pamlico County, N.C.

The Forster's Terns were first seen on 9 June 1970 near Bayboro. Four terns were present. Three were in breeding plumage, and one was an immature bird. On 10 June an adult was seen to feed the immature bird on two occasions. Feeding was accomplished by the adult bird's hovering over the immature bird and passing fish to it.

During the first week of July 13 Forster's Terns were seen in a flock over the Neuse River near Pamlico, N.C.

[Although no nests were found, the occurrence of adult birds feeding young in Pamlico County is further evidence of the breeding of this bird in North Carolina. The first recent evidence of nesting was reported by Grant and Fussell (*Chat*, 34:37-38) from Onslow and Carteret Counties.—DEPT. ED.]

Summer Records of the Saw-whet Owl At Mt. Mitchell, N.C.

MARCUS B. SIMPSON JR.

P. O. Box 167, Statesville, N. C.

14 August 1970

On the night of 13 June 1970, I conducted a survey for Saw-whet Owls (*Aegolius acadicus*) in portions of the Black Mountains between Steeps Gap and Mt. Mitchell, Yancey County, N.C. At 10:30 PM a single bird responded to my whistling and began cooing from a mixed grove of red spruce (*Picea rubens*), Fraser fir (*Abies fraseri*), and yellow birch (*Betula lutea*) on Wilson Ridge at an elevation of 6,240 feet. The ideal, calm wind conditions permitted precise localization of the source of the ringing, bell-like notes; and the owl was still calling when I left the area at 11:15 PM.

Subsequently, on the night of 19 June 1970, Bryan Taylor (pers. com), Chief Naturalist for the North Carolina State Parks, was whistling for owls at the campground area in Mt. Mitchell State Park. At approximately 10 PM a Saw-whet Owl began calling nearby in the same area where I recorded the bird during the previous week. Taylor and Hollis J. Rogers listened to the owl for some time but were unable to actually see the bird. A third summer record came on the night of 10 July 1970, when Park Ranger Clyde Hopson (pers. com.) spotted an adult Saw-whet Owl in the Restaurant parking lot (elevation 6,200 feet). The bird lit in front of Hopson's car and was observed in the headlights at a distance of less than 30 feet. Attempts to capture the bird were unsuccessful, and the owl flushed when the car stopped.

Previous records of the Saw-whet Owl from the Black Mountains have been reported by T.W. Simpson (*Chat*, 21:89-90, 1957), D.A. Adams (*Chat*, 23:66-67, 1959), W.A. West (*Chat*, 30:109, 1966), and M.B. Simpson Jr. (*Chat*, 32:83-89, 1968).

A Brewster's Warbler at Chapel Hill, N.C.

JAMES O. PULLMAN

Route 6, Box 149, Chapel Hill, N.C. 27514

22 July 1970

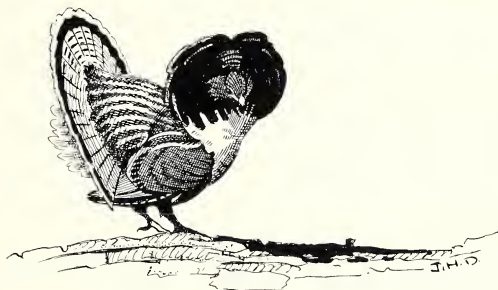
On 26 April 1970 a hybrid Brewster's Warbler (*Vermivora chrysoptera* x *V. Pinus*) was identified just southeast of Chapel Hill, N.C., by Oliver Ferguson. Later on the same date, I passed the site repeatedly and found the bird on four occasions over a 6-hour period, including one close study with 7X binoculars at a distance of 30 feet at eye level.

These observations were made along Morgan Creek at the Mason Farm, a wildlife preserve of the University of North Carolina, adjacent to the North Carolina Botanical Garden.

Plumage characters included a bright yellow crown, thin black eye line, entirely white underparts, and a diffuse yellow wing patch with no clear division into separate bars. The song, given repeatedly, was typical of the Golden-winged Warbler (*V. chrysoptera*).

The above comprises a first record for the Brewster's Warbler on Mason Farm, and this hybrid is quite scarce in our area. A recent comprehensive summary by R.J. Hader (*Chat*, 33:53-71) of many years of observations at Raleigh, N.C., 25 miles to the southeast, gives just two records, for 1888 and 1963 respectively. There is a recent report from Moore County by Jay Carter (*Chat*, 33:27). For the State as a whole, the 1959 revision of *Birds of North Carolina* gives three additional dates, for Chapel Hill, Montreat and Greensboro respectively.

It is interesting that the dates of the seven records noted above fall within rather narrow ranges, 26 April and 1 and 3 May in spring and 25, 28, and 29 August and 6 September (1888) in the fall.



BRIEFS FOR THE FILES

Compiled by ROBERT P. TEULINGS
Route 2, Chapel Hill, N.C. 27514
(all dates 1970)

GREATER SHEARWATER - One was seen floating and preening in the surf off Nags Head, N.C., on 24 October by Carl W. Carlson.

CATTLE EGRET - Three were found inland near New London in Stanly Co., N.C., on 16 October by Vivian Whitlock, and 6 were found near Durham, N.C., on the late date of 18 November by Mrs. Paul S. Payne.

BLUE GOOSE - Four were seen at Creech's Pond in northern York Co., S.C., on 24 October by William and Flo Cobey. One was present for a month after 9 November at Hilton Head Island, S.C., as reported by Stewart Rush and Caroline Newhall. One was at Lake Edgar Brown, Barnwell Co., S.C., on 2 and 3 November, Gerald E. Knighton.

SURF SCOTER - An unusual inland occurrence was recorded at Lake Wylie near Charlotte, N.C., where an immature male was found on 18 October by William and Flo Cobey.

GOLDEN EAGLE - Two were seen at Magnolia Gardens near Charleston, S.C., on 21 November by T.A. Beckett.

BALD EAGLE - A pair was reported by Dan Benfield to be engaged in nest building activities at Mattamuskeett N.W.R., New Holland, N.C., during November. Another pair was observed repairing a nest on South Island near Charleston on 22 November by Ted Beckett. Bald Eagles sighted elsewhere were an adult at Savannah N.W.R. near Hardeeville, S.C., on 4 November by J.O. Pullman, an immature near Hampstead, Pender Co., N.C., on 8 November by Frank Chapman, and an immature at Hobcaw Plantation near Georgetown, S.C., on 13 and 14 November by F.M. Probst.

PIGEON HAWK - On 24 October, Kenneth Able and Sidney Gauthreaux observed a heavy hawk flight moving south over Folly Beach, S.C. In approximately 1 hour during the morning they counted 11 Pigeon Hawks along with 10 Sharp-shinned Hawks, 4 Red-tailed Hawks, 4 Marsh Hawks, 2 Osprey, and 85 Sparrow Hawks.

VIRGINIA RAIL - One was a late and unusual visitor at North Wilkesboro, N.C., on 5 November, Wendell Smith.

BLACK RAIL - One was flushed from a weed field south of High Point in Guilford Co., N.C., on 25 November by James and Clarence Mattocks.

AMERICAN GOLDEN PLOVER - William and Flo Cobey observed a flock of 17 at Creech's Pond in northern York Co., S.C., on 1 November.

WILLET - Along the shores of Hartwell Reservoir near Clemson, S.C., single birds were seen on 11, 12, and 29 August and 5 September by Sidney Gauthreaux. One was also seen on 23 August near Fair Play, S.C., by Kenneth Able and Sidney Gauthreaux. These sightings are noteworthy because Willets are decidedly a coastal species and have seldom been recorded in the Carolinas away from salt marshes and ocean beaches.

PURPLE SANDPIPER - One was found at Isle of Palms near Charleston on 24 October by Kenneth Able and Sidney Gauthreaux.

LONG-BILLED DOWITCHER - Fifteen were identified among some 1,200 Short-billed Dowitchers in the Bodie-Pea Island area on 21 August by Paul Sykes. Inland, one was found at Hartwell Reservoir on 12 August by Sidney Gauthreaux, who identified the bird by its call.

BUFF-BREASTED SANDPIPER - Sightings of at least 25 birds were recorded by various observers at Kitty Hawk, Bodie Island, Pea Island, Smith Island and Wrightsville Beach during the period 7 September through 7 November. Generally, one or two birds were seen at a time, but eight were found at the north impoundment on Pea Island, 12 September, by Marcia Lakeman, Marcia Nelson, and Gene Evans. One was also found inland at Raleigh by Robert Hader on 12 September.

MARBLED GODWIT - In the Bodie-Pea Island area 25 to 30 were seen on 20 September by David Sonneborn. A flock of 30 was present at Oregon Inlet on 16 November, T.L. Quay et al.

HUDSONIAN GODWIT - A single bird was seen on 4 October at Pea Island by Jeanne and Ray Halsey, and one was later sighted in the same locality on 24 October by Carl W. Carlson.

POMARINE JAEGER - Individuals were seen at Bodie Island on 20 September by David Sonneborn and at Nags Head on 24 October by Carl W. Carlson.

PARASITIC JAEGER - One was seen on shore at Pea Island, 24 October, by Carl W. Carlson.

LAUGHING GULL - An immature bird was found inland at North Wilkesboro on the night of 10-11 August. It was picked up in an exhausted condition from a roadside by a policeman who took the bird to Wendell Smith for identification. This unusual incident occurred during a period of unsettled weather and strong easterly winds.

BONAPARTE'S GULL - One was observed inland at Roanoke Rapids Lake, Roanoke Rapids, N. C., on 21 November by Merrill Lynch.

FORSTER'S TERN - One was found inland at Raleigh on 10 September by Robert Hader.

SANDWICH TERN - Paul Buckley reported some 300 pairs nesting at Hatteras Inlet in June.

BLACK TERN - An estimated 400 were seen at West Onslow Beach, N.C., on 18 August by Gilbert Grant.

PILEATED WOODPECKER - Paul Sykes, Elizabeth Teulings, and Robert Teulings tallied 64 birds during a 38-mile canoe trip down the Congaree River from Columbia, S.C., on 15 September. A similar census on 18 September along 25 miles of the Wateree River below Hwy 378 resulted in a tally of 26 Pileateds.

WESTERN KINGBIRD - One was seen on 29 September and two on 24 October at Greenfield Lake in Wilmington, N.C., by Kitty Kosh and Mary Newhaus.

YELLOW-BELLIED FLYCATCHER - One was banded at Hillsborough, N.C., on 23 September by Charles Blake.

LEAST FLYCATCHER - Four were banded by Charles Blake at Hillsborough between 6 and 14 September. Dr. Blake commented that these were the first he had banded at his station since 1958. Migrants of this species also appeared at Umstead Park near Raleigh where single birds were seen and heard on 5, 19, and 30 September by Harry LeGrand.

SHORT-BILLED MARSH WREN - Transients were recorded inland at Chapel Hill, N.C., where two were seen on 19 September by James Pullman and one on 17 October by David Barnes. At Raleigh one was seen on 26 September by Robert Hader.

PHILADELPHIA VIREO - One was seen near Durham, N.C., on 13 September by Mrs. Paul Payne. On that same date one was also found at Cape Hatteras near Frisco by Rudolph Keller.

GOLDEN-WINGED WARBLER - Individuals were banded on 1 and 10 September at Hillsborough, N.C., by Charles Blake. In addition, rare fall sightings were recorded at Southern Pines on 20 and 24 August by Jay Carter, at Chapel Hill on 19 September by James Pullman, and at Raleigh on 23 September by Harry and Edmund LeGrand.

BLUE-WINGED WARBLER - Five were seen in the vicinity of Southern Pines, N.C., during the period 16 August through 1 September by Jay Carter. These are believed to be the first fall season records for that locality.

ORANGE-CROWNED WARBLER - An immature bird was banded at Chapel Hill on 18 October by Elizabeth and Robert Teulings.

NASHVILLE WARBLER - An early fall migrant was seen at Durham, N.C., on 11 August by Mrs. Paul Payne.

BLACK-THROATED GREEN WARBLER - A mid-summer sighting was recorded near Sumter, S.C., on 12 July by Evelyn Dabbs, Elizabeth and Robert Teulings.

CERULEAN WARBLER - In Wake County, N.C., near Raleigh, two were seen on 19 August and one on 20 August by Jeanne Halsey.

BAY-BREASTED WARBLER - One found at Folly Beach, S.C., on 25 October by Kenneth Able and Sidney Gauthreaux was an unusual coastal record.

CONNECTICUT WARBLER - An early fall transient was banded on 18 August at Hillsborough, N.C., by Charles Blake. Two were found dead at the WUNC television tower on Terrell's Mountain, Chatham Co., N.C., on 28 September by Wiley Sanders and Wallace Patterson (specimens to the State Museum). Another bird was banded at Chapel Hill on 3 October by Elizabeth and Robert Teulings.

MOURNING WARBLER - One was banded by Eloise F. Potter on 11 September at Zebulon, N.C.

WESTERN TANAGER - One was carefully identified by Wendell Smith at North Wilkesboro, N.C., on 22 September.

DICKCISSEL - One was found at the CBC Sanctuary near Tryon, N.C., on 11 October by Gerald Knighton, Calvin Zippler, and Ray Holzworth. At Raleigh one was seen on 31 October by Robert Hader, and another was observed at Pea Island on 15 November by Elizabeth and Robert Teulings.

LARK BUNTING - A female was seen on repeated occasions between 8 and 10 September near Wanchese on Roanoke Island, N.C., by Marcia Lakeman, Marcia Nelson, and Gene Evans.

HENSLOW'S SPARROW - Several were found dead at the WECT television tower near Singletary Lake in Bladen County, N.C., on 30 October by Jay Carter. The specimens are deposited in the collection of the University of North Carolina at Wilmington.

LARK SPARROW - One was seen at Huntington Beach State Park, Georgetown Co., S.C., on 30 August by F.M. Probst. Ted Beckett reported seeing two others at Bull's Island in the Cape Romain N.W.R. on 27 September and two at Magnolia Gardens near Charleston on 29 September.

CLAY-COLORED SPARROW - Two were observed at close range on Bodie Island, 6 October, by Carl W. Carlson.

LINCOLN'S SPARROW - Single birds were observed at Raleigh on 10 October by Robert Hader and 26 October by Harry LeGrand. At Chapel Hill, four birds were banded by Elizabeth and Robert Teulings, two on 3 October, one on 17 October, and one on 24 October.

CORRECTION—Photographs in the December 1970 *Chat* attributed to Geraldine Cox (cover, page 91) were taken by Dale Lewis, author of the paper "Summer Birds at a Coastal Marsh Impoundment in North Carolina." To prevent future errors involving photographs, contributors are requested to indicate on each photo the name of the photographer, subject, and top. Marking the top is particularly important if the subject is a nest or a scene reflected in water.—ED.

CONSERVATION

(Continued from Page 15)

habitat through logging, draining, building, and power dams, sport hunting, trophy hunting, and such local civic madness as rattlesnake round-ups, or the world's largest possum hunt.

Of all these the use of pesticides is probably the most apparent. Here are headlines from INSIGHT, put out by the Bureau of Sport Fisheries and Wildlife—

IBIS IN TROUBLE MERCURY NEW THREAT TO MEN AND ANIMALS DIELDRIN THREAT TO EAGLE GROWING ET TU UTAH IBIS SHELL THINNING IN SPARROW HAWKS

In a release from W.G. Duncan, we quote, "From soil or water pesticides enter the ecosystem and become the equivalent of a disease, polluting and infecting life in varying degrees at all levels. Entering the ecosystem means that living creatures that are exposed to a substance such as DDT incorporate it in some manner within their bodies. From there it begins a seemingly endless journey as it is concentrated, reconstructed, and passed on to progeny and predators. Once a contaminant enters the ecosystem it appears in unexpected places." It has been proven that DDT kills eagles, Bobwhite, Herring Gulls, oysters, meadow voles, penguins, seals, shrimp, crabs, and both fresh water and salt water fish. The estuaries are the natural collection point for DDT runoff from inland areas and the collection of DDT there can affect the entire food chain in coastal areas.

Yet DDT is but one offender; there are herbicides, fungicides, insecticides, rodenticides, nematocides, and miticides. All together, an article in the *Atlanta Constitution* tells us that there are 56,000 pesticides registered by the U.S. Department of Agriculture. It is estimated, however, that 25 basic chemicals constitute 90% of pesticide use in the United States. Children have died from exposure to pesticides used on tobacco crops.

Use of Mirex to get rid of the fire ant is considered especially dangerous to wild life, as it too, can enter a food chain and accumulate in living things. It can kill birds and mammals and affect their reproduction. Sprayed over marshes it has been proven to kill Robins, Blue Jays, catfish, Turkey, quail, Brown Thrashers, kingbirds, and deer. It has a highly cumulative effect on many organisms.

Chemical pollution, caused when the residues and dyes from chemical plants drain into streams and rivers is another source of danger to wild life. A high accumulation of mercury has been discovered in Shovelers, Pintails, Mallards, and Blue-winged Teal in Michigan and North Dakota. Mercury contamination in fish has resulted in bans and warnings in Canada and 20 states, including Georgia, North Carolina, South Carolina, Tennessee, and Kentucky. A long stretch of the Savannah River was recently closed to fishing because of mercury contamination. In Alberta Province, the pheasant and Hungarian Partridge season was closed because of mercury infested birds. In Michigan mercury was found in squirrels, rabbits, grouse, and quail. Eggs of Red-breasted Mergansers, cormorants, Great Blue Herons, and Common Terns have been found to be sterile because of mercury poisoning.

The wintering duck populations of this continent have dropped as much as 350,000 in one season because of oil spills. Dr. Walter Brekinridge in a recent lecture said as many as 100,000 birds have died in a single oil swoop, and he considers it one of the major hazards to bird migrants. Migrating birds also have to contend with towers, lights, great expanses of glass in buildings, all extreme dangers to bird travel. The picture of 54 dead redstarts picked up under one tower is not a comforting sight.

Sewage accumulating in lakes and streams is another hazard to wild life. Below Winston-Salem, 150,000 fish died in the Yadkin River, killed by raw sewage that

depleted their oxygen supply.

Opening National Parks and Wildlife Refuges in response to public pressure for hunting, or on the lame excuse of an over-population of some species, poses still another serious threat. Dr. Gordon Wilson wrote, "The zeal of deer hunters who surround Mammoth Cave National Park each season and their determination to bag a deer makes me think of gangsters. But for an enlarged ranger force and severe handing out of fines, one season would destroy every deer in the park and much other wild life, for the man with the gun likes to take a pot shot at any living thing."

What can we do about our rare and endangered wild life?

1. Protest hunting from airplanes, or from any moving vehicle such as a jeep, snow-mobile, or motorcycle. Stop all bounty hunting of wolves, coyotes, and other species.
 2. Protest the collecting of wild species for use by biology classes. Frog assembly-dissecting kits are already available, and if wholesale collecting of live frogs and other amphibians for high school and college classes is not stopped, soon there will be none to collect.
 3. Swear off the use of furs and skins of wild animals and reptiles, and boycott stores that sell such items. Protest newspaper advertising of such items as reptile bags or leopard coats.
 4. Discourage the use of magazines, newspaper, radio, television, or films, to make a hero of the trophy hunter, or the man who kills the biggest beaver, hawk, or wild cat. Encourage enforcement of all existing laws protecting wildlife. Protest when sports-writers advocate killing crows or other birds for sport. Tell your local Chamber of Commerce that you do not approve of snake hunts or possum hunts held for tourist promotion.
 5. Support the conservation organizations like the CCNC, ECOS, the Sierra Club, National Audubon, and others in their fight to establish refuges and save wilderness areas, and in their fight against the use of pesticides.
 6. Let your representatives know how you feel about legislation on conservation issues.
 7. Never use Dieldrin, Endrin, Aldrin, Toxaphene, Heptachlor, DDT, Chlordane, Lindane, mercury, lead, or arsenic. Use only those detergents that are free of phosphates.
 8. Read the Yearbook, MAN, AN ENDANGERED SPECIES, available from the Supt. of Documents, U.S. Printing Office, Washington, D.C. 20402, for \$1.50.
- MAN, also an ENDANGERED SPECIES—it gives you something to think about, doesn't it?

CAROLINA BIRDS AND BIRDERS

(Continued from Page 14)

A Jaunty Autumn Coastal Jaunt

The balmy September weather was made to order for a trip to the Outer Banks. We saw about 65 species, but we felt amply rewarded because, being mountain dwellers, we don't see the coast very often...not even on a clear day. Anything, except blackbirds and their ilk, would prove welcome surprises.

Pea Island National Wildlife Refuge seemed quietly braced for the seasonal influx of thousands of Snow Geese. Pheasant cackled in the tall grass. Numerous Cattle Egrets hunched motionless on the utility pole cross-ties like oversized insulators. On a shallow pond a squad of Black Skimmers, a few Canada Geese, and half a hundred ducks (mostly Blacks) dabbled or dozed. Suddenly they were swept skyward in cackling confusion by a Peregrine Falcon who, landing on a near-by mud bar, surveyed his now empty domaine.

A fresh ocean breeze kept all the small birds under cover but we flushed a number of Palm Warblers and a Yellowthroat. Immature Herring Gulls were everywhere and so were Laughing Gulls and a few, rather aloof, Great Black-backs.

On sandbars conveniently observable from the Hatteras Ferry, we saw many Brown Pelicans, several cormorants, a few turnstones, and assorted peeps.

From the bridge over Island Creek, one of Ocracoke's many tidal streams, we watched the antics of a social group of juvenile gallinules when, only a few feet below us, a snipe froze into rigid alertness. Two grebes played hide-and-seek and a tiny Least Bittern blended motionless into the brownish vegetation while two Semipalmated Plovers, bobbing politely now and then, continued their probing of the muddy shores unmindful of our presence. Farther downstream (if there is such a thing in a tidal creek) two herons kept minding their own business. What surprised us the most, however, were four nutria in and out of the water who, though watchful, seemed not overly perturbed.

Walking toward the beach we came across countless ghost crabs ranging in size from a dime to a silver dollar darting to and from their burrows which, with few exceptions, were in the lee of the dunes. Their sand-gray bodies made them almost invisible, were it not for their long-stemmed eyes protruding upward like a pair of burnt match sticks.

Sitting in the sand just out of reach of the surf's foamy fingers we watched several sandpipers scurrying about with the compulsive hurry of late Christmas shoppers while offshore Least Terns plummeted after their finny prey. Suddenly a clamoring multitude of about 40 Willets burst upon us from the sea, landing on the beach less than 100 feet away. After raising their wings overhead, they deliberately folded them as if for the last time.

The toll ferry provides a welcome alternative for the return to the mainland, depositing its passengers not far from the Cedar Island Refuge currently under development as another waterfowl wintering place. However, we continued toward Atlantic Beach and stayed not far from Old Fort Macon, surrounded by salt marshes. Of special interest here was a Marbled Godwit drilling his dark-tipped flesh-colored bill into the black ooze up to his eyes. Only once before had I seen this splendid bird...in the refrigerator of Ludlow Griscom, who had collected it the day before. To be able after these many years to add it to my "Life List" filled me with pleasure and gratitude.

By-passing the Wilmington beaches, we continued to South Carolina's Huntington Beach State Park, which more than fulfilled our expectations. While its beach was bare of man or creature in either direction, the dike road across the marshes proved very rewarding. In addition to nearly every possible species of heron we saw Clapper Rails and five, what I took for immature, White Ibises. In areas of possible overlap one cannot always be certain of one's identification, especially since shortly thereafter I nearly passed up an alligator by mistaking it for a partly submerged old snow tire.—RUDOLPH HOSSE, Route 3, Box 287A, Willow Road, Hendersonville, N. C. 28739



Founded 6 March 1937

Incorporated 8 August 1949

Carolina Bird Club is an incorporated association for the study and conservation of wildlife, particularly birds, chiefly in the Carolinas. Founded in 1937 as the North Carolina Bird Club, it was joined in 1948 by several South Carolina natural history clubs and the name changed to the Carolina Bird Club.

MEMBERSHIP

The Carolina Bird Club, Inc., is a non-profit educational and scientific organization. Dues, contributions and bequests to the club are deductible from State and Federal income and estate taxes. Membership is open to anyone interested in birds, natural history and conservation. The several classes of membership are listed below. Checks should be made payable to Carolina Bird Club, Inc., and sent to CBC Headquarters, Box 1220, Tryon, N.C. 28782.

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THE CHAT

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All papers, census reports and notices for publication in *The Chat* should be sent directly to the Editor. However, items intended for the General Field Notes, Backyard Birding, or Conservation departments should be sent to the respective department editors.

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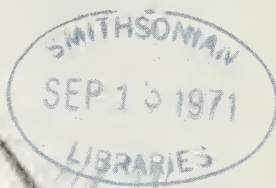
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The Chat

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The Chat

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OUR COVER—A Mockingbird demonstrates its ability to capture insects in a photo by John Trott.

CASPIAN TERN NESTING IN SOUTH CAROLINA

TRAVIS H. McDANIEL and THEODORE A. BECKETT III

Although the Caspian Tern (*Hydroprogne caspia*) is known to be a year-round resident of South Carolina, the 1970 edition of *South Carolina Bird Life* (p. 608) lists it as a non-breeding species because no nest or eggs have been collected in the state. E. Milby Burton, T.A. Beckett III, and others who have studied the colonial birds breeding on the islands along the coast of South Carolina during the past 50 years have never found a Caspian Tern nest or chick. Wayne's statement that the species nests in the Royal Tern colonies at Cape Romain (*Birds of South Carolina*, 1910, p. 4) has been widely accepted, though in retrospect it appears to have been based upon questionable information received from others rather than upon field work actually conducted by the distinguished ornithologist of Oakland Plantation near Mt. Pleasant.

On 5 June 1970 Travis H. McDaniel, then manager at Cape Romain National Wildlife Refuge, made a routine check of nesting birds on Cape Island. As he walked through a Black Skimmer and Gull-billed Tern colony at the south end of the island, he noticed two tern eggs that were appreciably larger than those normally laid by Royal Terns, which are common nesters. During three years at Cape Romain, he had noted that Royal Terns usually lay only one egg. As McDaniel returned to his patrol truck, the birds began to settle back on their eggs. At this time he saw a very large tern dropping down from the air to settle on a nest despite harassing by Black Skimmers. Immediately he ran to the site and discovered that the two large eggs were exactly where the large tern was trying to alight. Looking the bird over carefully, McDaniel identified it as a Caspian

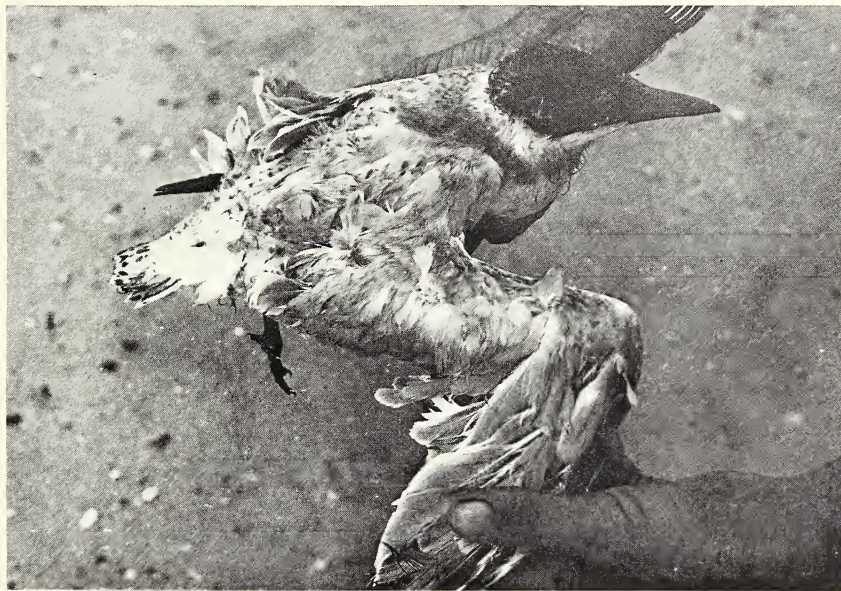


Figure 1. Note dark crown and unforked tail of Caspian Tern chick captured at Cape Romain National Wildlife Refuge. (Photo by S.C. Langston)

Tern. The second bird of the nesting pair appeared, and they both began diving upon him. Noting the location of the nest in relation to some driftwood, McDaniel departed.

The nest was an unlined depression in the sand. The two eggs were about $\frac{1}{2}$ inch larger than the average Royal Tern eggs found on the refuge. While of the same general color pattern as Royal Tern eggs, the Caspian Tern eggs were darker both in the dark and the light spotted areas and had much less white than the Royals.

The single Caspian Tern nest was within about 4 feet of several Black Skimmer nests. Approximately 150 pairs of Black Skimmers and 20 pairs of Gull-billed Terns were present. The colony was located on the south end of Cape Island, which is a long and narrow sand spit with little to no vegetation and subject to ocean flooding during above normal tides.

McDaniel checked the Caspian Tern nest site again on 2 July, finding two eggs and both adults. On 17 July the two adults were still present, but the eggs were gone. He saw no tern chicks during this brief visit.

On 24 July McDaniel advised E. Milby Burton, director of the Charleston Museum, that a Caspian Tern nest had been found at Cape Romain National Wildlife Refuge. The next day S.C. Langston, Beckett, and Edward Murray met McDaniel at the Cape Island skimmer colony and quickly confirmed his identification of the adult Caspian Terns. The four men began to cover the beach area, where the terns buzzed them persistently, in search of the large tern chick McDaniel had seen through binoculars running near the surf shortly before the other men arrived. As they approached the beach the chick headed into the surf and swam out of camera range before a picture could be taken. McDaniel attempted to swim after the chick, but he was unable to catch it in the heavy seas. Langston and Beckett pursued the bird by boat and were successful in netting it. One of the adult Caspian Terns circled over and near the chick while it was in the water.

After being brought ashore the chick was examined closely and positively identified as a Caspian Tern by Beckett. Beckett banded the Cape Romain chick, and Langston photographed it (Figures 1 and 2).

The Caspian Tern chick appeared to be about three weeks old. This healthy young bird was not capable of flight, but it could run and swim very well. Beckett, who has banded thousands of Royal Terns, commented that no Royal chick could swim as fast as did the Caspian chick. Its outstanding features in comparison to a Royal Tern chick were the very dark head and much larger bill. The upper half of the young Caspian Tern's head was all dark with a black eye stripe and crown of dark slate or charcoal color. The juvenile Royal Tern also has a black eye stripe, but its crown is white. The juvenile Caspian had a slate-colored mantle, and the outer three or four primaries were already black as in the adult. The juvenile Royal has a lighter colored mantle without black primaries. The young Caspian's tail was almost straight across, while the young Royal's tail is slightly notched.

In addition to being the first positive evidence of Caspian Terns breeding in South Carolina, and the Cape Island nest is of interest for several other reasons. Bent (*Life Histories of North American Gulls and Terns*, 1921, p. 202-211) gives the incubation period for the Caspian Tern as about 20 days. McDaniel first saw these eggs on 5 June, and they were still not hatched 28 days later (2 July). While Caspian Terns are known to build fairly elaborate nests in some localities, the unlined depression seems to be typical for nests on sandy southern beaches. Bent mentions Caspian Tern nests found in colonies with several different species of sea birds, but he cites no instance of one in a Black Skimmer colony. In Louisiana, according to Bent, Caspians avoid nesting with Royal and Sandwich Terns, and this appears to be the case at Cape Romain where both these smaller terns breed regularly.

Although many ornithologists visit Cape Romain, their activities are usually confined to Bulls Island, which is open all year for bird study. Nesting sites of the various colonial birds, such as the Black Skimmer colony on Cape Island, are usually posted as "Closed Area" with visitors permitted only at the discretion of the refuge manager. Birders from the Carolinas will be especially interested to know if during the 1971 breeding season



Figure 2. Ted Beckett holds the Caspian Tern chick banded 25 July 1970 at Cape Romain. Note the dark outer primaries. Although well feathered and able to run and swim swiftly, the young bird was still flightless. (Photo by S.C. Langston)

refuge personnel will once again find a pair of Caspian Terns nesting successfully in South Carolina.

Cape Romain National Wildlife Refuge, Box 288, McClellanville, S.C. 29458 and Magnolia Gardens, Route 4, Charleston, S.C. 29407.

[Mr. McDaniel's present address is Piedmont National Wildlife Refuge, Round Oak, Georgia 30180.--ED.]

THE RED-COCKADED WOODPECKER IN SCOTLAND COUNTY, N.C.

RICHARD E. PRICE JR.

The late Ed Lyon introduced me to the Sandhills Wildlife Area shortly after I moved to Laurinburg, N.C., and it was there on 29 October 1960 that he showed me my first Red-cockaded Woodpeckers (*Dendrocopos borealis*). His marvelous enthusiasm for this remarkable bird proved to be contagious, and in the years 1960 through 1968 I made many trips into the Sandhills to find and study it.

Formally known as the North Carolina Wildlife Management Area, the preserve is located in Moore, Richmond, and Scotland Counties. My field work was limited to that section in Scotland County known as Area B-1. Manager Lyle Morgan, Hoffman, N.C., was most cooperative in allowing me access and in giving permission to construct a blind for nest observation.

The Red-cockaded Woodpecker appears to be very well established as a breeding and wintering species in the Sandhills. When I first asked Mr. Morgan where I could find any of these birds he pointed to a nesting tree in his front yard! The area of my study produced six nesting trees all within about 250 yards of a one-mile section of an unpaved road.

ENDANGERED SPECIES

As early as 1954 this bird was seen to be an endangered species. Sprunt (1954) said that "it is definitely uncommon now anywhere in the Southern Region," and he added, "with continued cutting of pine for pulpwood this woodpecker will doubtless decline even further." I was encouraged from my own field work and from that of others (see Lee Jones, 1963) to believe that this bird is now fairly common in certain areas. I had hoped that this meant a reversal of Sprunt's dismal prophecy. However, the recent careful work of Lay and Russell (1970) would seem to indicate that this species is in real danger. "The survival of the Red-cockaded Woodpecker . . . is endangered by its apparent requirement for old, diseased pine trees." Their studies showed that this species prefers "pines with redheart disease caused by the fungus *Fomes pini*. This is a common pine forest disease that enters trees through scars and broken limbs but rarely makes much progress in trees less than 75 years old. . . . Tree ages, among 60 bored, ranged from 56 to 193 years." The means on the three study areas were 103, 89, and 72 years. Current forestry practices, however, favor cutting pines much younger than this. US Forest Service studies show that most pulp wood trees are cut before age 30 and that other forest industries cut trees before age 50. Their judgment is rather grim: "The Red-cockaded's endangered status is reflected by the combined estimates of 2.1 per cent annual growth and 5 per cent annual mortality rate of the trees it prefers. To survive the species needs a steady ingrowth of older trees whose value to the landowner is declining. As these are harvested they are being replaced by pines that mature for cutting well before age 50."

The continuing preservation of wildlife areas including open pine barrens in which older trees will be allowed to stand is vitally important for the future of this bird.

UNUSUALLY LOW NEST

My nesting studies were cut short by my move to Mars Hill, N.C., in 1968. The purpose of this paper is to share my observations about an unusually low nest, only 5 feet above the ground, and about feeding activities that I have never seen described in the literature.

The nest of the Red-cockaded Woodpecker is made in a living pine tree with a dead heart. Usually the entrance is rather high above the ground. Sprunt (1954) says that

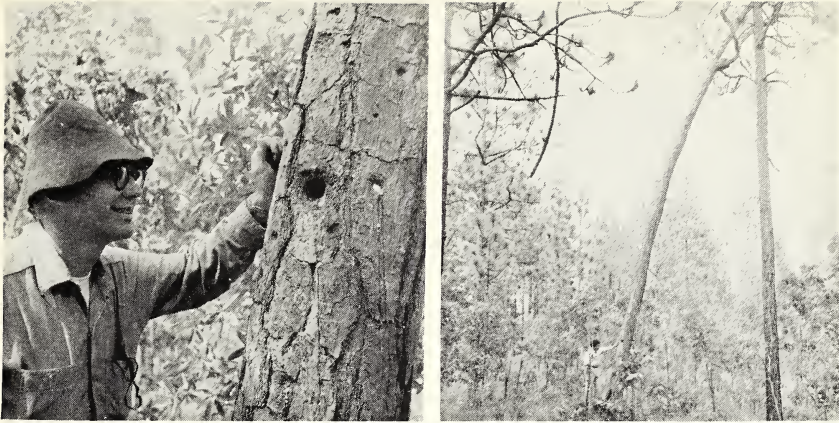


Figure 1. The author examines an unusually low Red-cockaded Woodpecker nest cavity in Scotland County, N.C. The entrance hole was only 5 feet above ground level. (Photo by Glen Bingham)

Figure 2. Glen Bingham stands beside the same tree. Photo by the author shows general habitat and the deformed nest tree as well as the low entrance hole.

the distance is "from 20 to 70 feet above the ground." In a study of 86 trees in Texas, Lay and Russell (1970) found that "hole height ranged from 10-55 feet with means of 25, 30, and 35 feet. Three holes not on these tracts were 5, 6, and 9 feet high." I do not have a record of the date, but I think that it was sometime in the winter of 1967 that I found a nest (Figure 1) the entrance of which was exactly 5 feet from the ground, thus matching exactly the lowest tree found by Lay and Russell. The entrance hole was 2 inches in diameter on the outside, and the bottom of it sloped upward so that the inside diameter was 1.6 inches. The tree itself was deformed in being bent over from the vertical (Figure 2). It thus matched Sprunt and Chamberlain's (1949) description of a nesting tree as "frequently one which is distorted in growth with a bend or crook in [the] trunk."

This nest evidently was not used in 1968. By 29 March there had been sufficient pecking around the entrance hole to cause the sap to flow very freely, and I found many small feathers around the entrance, but by the time I found birds nesting in other trees nearby no birds were seen coming to this nest. My observations indicate nesting usually takes place in late April. The earliest note of nesting I have is dated 23 April. Lee Jones (1963) says that in South Carolina nesting usually begins "by April 21."

CALLING WOODPECKERS

Robert P. Allen is quoted by Bent (1939) as reporting that he and Herbert Stoddard successfully called Pileated Woodpeckers by tapping on a wood surface. I was able to call Red-cockaded Woodpeckers in this area by tapping on a tree with the edge of a half-dollar or with the end of my pocket knife. One call of this bird is a loud and excited "cheep, cheep, cheep." On 16 February 1968 a bird feeding directly above my head in a tree gave this call which brought another bird that arrived with a loud fluttering of wings.

FEEDING BEHAVIOR

Some observers have reported that the bird feeds mainly in the tops of trees (Bent, 1939; Pearson et al., 1959) while others say they are usually seen on the trunk of the tree (Forbush and May, 1939). From my own experience I would say that both these observations are valid. At times I have seen the birds feeding high in the tops. On 20 October 1967 I saw one bird feeding in pine cones on the branches of a tree and two others on an oak tree trunk. On 16 February 1968 I saw one bird feeding on an oak tree along with a sapsucker. Most of the birds in my experience seem to prefer feeding on the trunk of the tree. Ligon (1968) found that male woodpeckers preferred the trunk above 15 feet and the limbs and branches while the females preferred the trunk below 15 feet. This would seem to account for the differences in feeding preferences reported by previous observers.

The food of these birds consists of, in addition to insects and conifer seeds, the larvae of wood boring insects (Sprunt and Chamberlain, 1949). In their feeding they work quietly on the tree with a very soft tapping and I was amazed one day (16 February 1968) to see a shower of bark chips float down from the feeding tree. One piece of bark measuring $1\frac{1}{2}$ by $3\frac{1}{2}$ inches lies on my desk as I write this, and it is a pleasant reminder of an unusually warm and lovely winter day in the field. This same day I observed a remarkable feeding habit that I had not seen before or read about in the literature. I was watching one bird from about 20 feet come down a pine tree backwards in jerky hops. The bird would peck for a while and then cock its head to one side against the tree as if listening for insects. Then it would probe beneath the bark scales of the pine with its head turned sideways to the trunk (and flat against it) to enable the bill to reach under the scales of the bark. Then, as I looked in disbelief, the bird rotated its head 180 degrees so that *while the body faced the tree the head faced away* allowing it to feed beneath bark scales directly above it.

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P. O. Box 146, Mars Hill, North Carolina 28754, 4 November 1970.

STATUS OF THE BARROW'S GOLDENEYE IN NORTH CAROLINA

MARCUS B. SIMPSON JR.

According to the American Ornithologists' Union (1957), the Barrow's Goldeneye (*Bucephala islandica*) winters "on the Atlantic coast from the Gulf of St. Laurence south to New York (Long Island), rarely to South Carolina." The exact basis for this statement is uncertain, however, for Sprunt and Chamberlain (1949) list no records of the bird from South Carolina. In North Carolina, on the other hand, the Barrow's Goldeneye has been the subject of controversy and confusion since the 1890s. Reports of specimens were published and then later retracted; an apparently authentic specimen was collected and then lost; the existence of an additional record was disregarded; and previously retracted errors have been perpetuated in the modern literature. In light of this situation, a close scrutiny of all records is needed to define clearly the status of Barrow's Goldeneye in North Carolina.

SOURCE OF THE CONTROVERSY

A total of five North Carolina records of the Barrow's Goldeneye, all based on collected specimens, have been reported in the literature. The major source of confusion over the authenticity of these records is due to the difficulty in positively distinguishing the Barrow's Goldeneye from the Common Goldeneye (*Bucephala clangula*). In the field, conclusive identification is difficult; but there are three essential marks in the adult males which separate the two species. Although both birds have a prominent white patch between the bill and the eye, Roberts (1955) states that this area is triangular or crescentic in the Barrow's but circular or oval in the Common (Figure 1). Furthermore, the head of the Barrow's is a deep, rich purple, in contrast to the greenish-black head of the Common Goldeneye. Although both birds have a long, white wing patch, this area is divided by a transverse black bar in the Barrow's Goldeneye; and, as pointed out by Kortright (1942), the Common Goldeneye appears more extensively white in the field due to the prominent white scapulars and the paucity of black edgings on the sides. In spite of these differences, three of the five specimens reported from North Carolina were incorrectly identified at the time of their initial publication; and Pearson, Brimley, and Brimley (1919) were forced to retract these three erroneous records.

OBSERVATIONS

The first published report of a Barrow's Goldeneye from North Carolina came when Brimley (1893) claimed that a specimen had been obtained at New Bern:

"*Glaucionetta islandica* — Among the specimens which were purchased by the State to exhibit at Chicago was a Goldeneye, mounted at New Bern in 1892 and said to have been taken near that place."

This record was subsequently quoted by Smithwick (1897); but Pearson, Brimley, and Brimley (1919) later published a retraction of the report, stating that the bird had been incorrectly identified—it was actually a Common Goldeneye. In spite of this retraction, Brimley's (1893) New Bern record was erroneously included by Hasbrouck (1944) in his study of the winter distribution of Barrow's Goldeneye on the Atlantic seaboard.

In the same initial paper, Brimley (1893) reported a second specimen, taken by John S. Cairns near Weaverville, Buncombe County:

"... I received a letter from Mr. Cairns in which he said he had shot a Duck he thought was *islandica*."

This specimen was collected on 17 February 1893 and is now housed in the Museum of Comparative Zoology at Harvard University, Cambridge, Massachusetts. However, this bird also proved to be a Common Goldeneye (formerly called American Golden-eye), for Pearson, Brimley, and Brimley (1919) stated:

"The specimen taken by Cairns in February, 1893 . . . is in the collection of William Brewster, who informs us that it is a male *americana* assuming the adult plumage."

It is important to note, however, that Cairns said in his letter to Brimley that he "*thought*" the bird might be a Barrow's Goldeneye, not that it *was* a Barrow's Goldeneye [*italics mine*]. In fact, the specimen was correctly identified as an Common Goldeneye by Cairns before he sent it to Brewster. This fact is of importance in light of Cairns' later claims regarding his May 1893 specimen of Barrow's Goldeneye, for Stone (1920) sharply criticized Pearson and the Brimleys for including the species on Cairns' authority in the 1919 edition of *Birds of North Carolina*:

"*Clangula islandica* entered on the basis of a specimen reported by Cairns although another specimen obtained and identified by the same collector proved to be *C. c. americana*."

In Cairns' defense, it should be emphasized that he *did not* identify the February 1893 specimen as a Barrow's Goldeneye. In spite of the retraction by Pearson, Brimley, and Brimley (1919), Hasbrouck (1944) also accepted this erroneous record as valid.

The third and most controversial report of the bird from North Carolina came when Cairns (1894) stated:

"Barrow's Goldeneye—Although this bird is said to be rarely, if ever found south of New York state, a male I took the past spring is unquestionably of this variety."

The precise date of the record was published as 6 May 1893 by Smithwick (1897) and Bent (1925), while Pearson, Brimley, and Brimley (1919) listed this as the only valid sighting from North Carolina:

"The one record, therefore, is that of a male which Cairns reported that he took in Buncombe County on May 6, 1893. This specimen has not been located."

To date, the location of this specimen has never been discovered; and the validity of the record rests entirely on Cairns' integrity and ability. In this regard, Allen (1895) speaks of Cairns as a "thoroughly trustworthy observer," and W.K. Boyd (1897) also spoke of Cairns' reliability:

"But the . . . greatest thing that can be said of Mr. Cairns is that he was authentic. . . . He never made a statement unless he had a specimen to support his assertion—never entered into a discussion without convincing evidence that he was right."

Cairns' strict standards combined with his claim that the bird was "*unquestionably*" [*italics mine*] a Barrow's Goldeneye lend considerable weight to the validity of this record. As mentioned previously, however, the decision to include the bird on the state list on the basis of this May 1893 record was criticized by Stone (1920), who claimed that Cairns' allegedly erroneous identification of the February 1893 specimen made this later record highly questionable. Stone's criticism apparently prompted Pearson, Brimley, and Brimley (1942) to drop the bird from the state list altogether, for the second edition of *Birds of North Carolina* stated:

"It does not seem to occur in the State, for, although it has been reported on several occasions, all the specimens that we have been able to trace have proved to be American Golden-eyes."

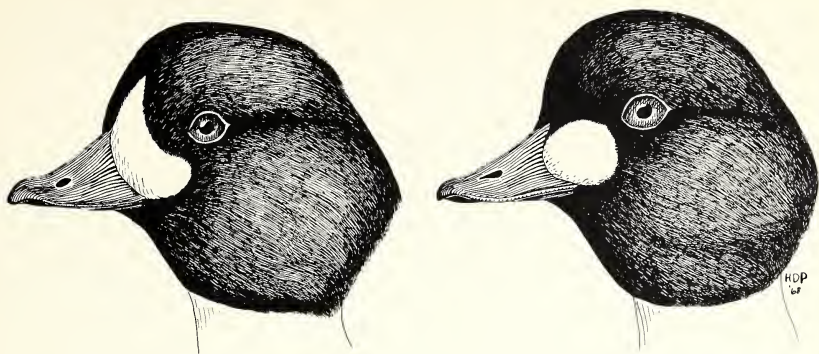


Figure 1. Adult male Common and Barrow's Goldeneyes can be identified in the field by the color of the dark head and by the shape of the white cheek patch. The Barrow's Goldeneye (left) has a deep, rich purple head and triangular or crescentic cheek patch. The Common Goldeneye (right) has a greenish-black head and rounded cheek patch. (Drawings by H. Douglas Pratt)

I have spent a considerable amount of time attempting to locate Cairns' May 1893 Barrow's Goldeneye specimen, but no results have been forthcoming. I have received reports from the following institutions indicating that the specimen is not in their collections: United States National Museum (Richard C. Banks, pers. com.); Field Museum of Natural History, Chicago (E.R. Blake, pers. com.); New York State Museum (R.S. Palmer, pers. com.); Museum of Comparative Zoology (R.A. Paynter Jr., pers. com.); American Museum of Natural History (Dean Amadon, pers. com.); Carnegie Museum (K.C. Parkes, pers. com.); and the Philadelphia Academy of Natural Sciences (James Bond, pers. com.). Furthermore, I have examined the collections at UNC-Chapel Hill and Duke University, and there is no evidence for the receipt of the specimen at either institution. I strongly suspect that this specimen may have been lost or destroyed around the time of Cairns' death in 1895. My biographical studies of Cairns have revealed that a large number of his bird skins were lost in transit to Harvard, a considerable number were destroyed in a fire at Weaverville, and others were allowed to deteriorate in unopened packing crates at several institutions. It is possible, although far from certain, that the bird was lost in one of these incidents. Thus, although this record has never been repudiated, confirmatory evidence of its authenticity remains lacking.

The fourth report of a Barrow's Goldeneye in North Carolina was published by Smithwick (1897) who stated that:

"A specimen was received at the State Museum which was determined to be *C. islandica* in the early part of February, 1897."

However, Pearson, Brimley, and Brimley (1919) later retracted this claim, stating that the bird had been subsequently identified as a Common Goldeneye.

The fifth and final record of the Barrow's Goldeneye from North Carolina was apparently first published by Hasbrouck (1944) who stated that a specimen taken in the state on 7 February 1895 was in the collection of the Field Museum of Natural History in Chicago. Subsequently, Hellmayr and Conover (1948) also mentioned this specimen, giving the same information as Hasbrouck. Emmet R. Blake (pers. com.) informs me that the bird is listed as Accession No. 18,628 of the Field Museum of Natural History; and he reports that the origin of the bird is unknown, except that it was acquired by the Museum in 1905 as part of the Charles B. Cory Collection. Blake has examined the specimen and confirms that it is a typical adult male *Bucephala islandica*, taken in

"North Carolina" on 7 February 1895, but the specific locality and the name of the collector are unknown. The file ledger listing the Cory Collection of some 20,000 specimens might have this vital information; but to date, the list has not been examined, and the specimen, although authentic, lacks complete supporting data.

DISCUSSION

Of the five North Carolina reports of Barrow's Goldeneye, only two merit further discussion, namely the specimen at the Chicago Field Museum and Cairns' May 1893 record. Unfortunately, the report of the CBC Records Committee (1968) does not cover the unique situation presented by these two records.

The Records Committee (1968) states that an extant specimen is valid evidence for inclusion of a species on the state list; but the requirements for supporting data are unclear. In my opinion, this absence of supporting data (precise locality and identity of the collector) materially lessens the value of the Chicago Field Museum specimen to the point that it cannot be accepted as confirmatory evidence of the bird's occurrence in North Carolina. There are numerous incidents of incorrectly labeled birds finding their way into museum collections, especially during the 1800s; and the possibility that this bird was taken outside that state cannot be ruled out with certainty. If future examination of the Cory Collection ledgers should happen to reveal this information, however, the specimen could be considered as a valid basis for the inclusion of the species on the state list.

The significance of Cairns' May 1893 record is likewise unclear. Obviously a lost specimen does not have the same significance as an extant specimen, yet it seems to carry more weight than a sight record. On the other hand, Cairns was apparently the only ornithologist to examine the bird in question; and the record, therefore, might best be considered comparable to a sight record. In either case, this May 1893 record is not sufficient evidence to admit the bird to the North Carolina state list, in spite of Cairns' integrity and competence.

On the other hand, the existence of these two reports cannot be completely disregarded, as was done by Pearson, Brimley, and Brimley (1942). On the basis of these two records, therefore, I propose that the Barrow's Goldeneye be admitted to the hypothetical list for the state of North Carolina until such time as additional pertinent information is presented, either to substantiate or reject the validity of the reports. The inclusion of the species on the hypothetical list is in keeping with the recommendations of the Records Committee (1968).

SUMMARY

The Barrow's Goldeneye has been reported in North Carolina on five occasions, but three of these records have been proved erroneous. A re-evaluation of the two unrepudiated records of the Barrow's Goldeneye indicates that the bird should be admitted to the hypothetical list for the state.

ACKNOWLEDGEMENTS

For assistance in the preparation of this paper, I am indebted to Dean Amadon, Richard C. Banks, Emmet R. Blake, John Bull, Eugene Eisenmann, Dianne Maurer, Ralph S. Palmer, Kenneth C. Parkes, Raymond A. Paynter Jr., Douglas Pratt, Thomas L. Quay, George E. Watson, and Alexander Wetmore.

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P.O. Box 167, Statesville, N. C., 23 August 1970.



Conservation

. . . with Marie Mellinger

Have You Thanked a Green Plant Today?

Among the many educational offerings of Ecos, the ecology organization at Chapel Hill, N.C., are a wide selection of bumper strips. Most provocative is "have you thanked a green plant today?". The ecologists tell us that plants, especially trees, are the best air filtering devices, necessary to control air pollution. Plants are vitally important in preserving our water sheds and preventing water run-off. Plants moderate temperatures. All this besides the great value of trees and plants for food, clothing, medicine, building, paper, and countless other uses. But the most basic value of green plants is often overlooked. Without green plants there would be no other life on this planet, for only plants are capable of synthesizing sun energy into the vital carbohydrates necessary for life. Directly or indirectly plants are the basis of every food chain. Without them we could not exist. Have You Thanked a Green Plant Today?

Wild Flower Pilgrimages

The increasing popularity of wild flower pilgrimages is encouraging. More and more people are learning to admire our native plants in their natural surroundings and work for their preservation and protection in the natural areas containing rare and endemic species. Many of our young people are attending these wild flower pilgrimages and taking an active part. The great success of the recent wild flower weekend in Rabun County, Georgia, and Macon County, North Carolina, was largely due to the help and enthusiasm of young leaders.

Perimeter Road Preferred

New and timely is the proposed phasing out of Highway 441 from Cherokee to Gatlinburg, through the heart of the Great Smoky Mountains National Park. A perimeter road, circling the park with 11 visitor centers is the suggested alternate. A copy of the preliminary report, written by George B. Hartzog, director of the National Park Service, is available from the National Park Service Information Office, Department of the Interior, Washington, D.C. 20270.

Hawk and Owl Protection

The South Carolina Senate tentatively approved a bill previously passed by the General Assembly protecting birds of prey. The Senate went a step further and eliminated the part of the act permitting land owners to kill hawks and owls in the act of destroying poultry.

Battle for Standing Indian Lost

Logging has already begun in the Standing Indian area of North Carolina, despite efforts of the Girl Scouts and conservationists to save the area. The power saws sound the death knell for an ecosystem it took nature hundreds of years to bring to perfection.

Ban on Clear Cutting Proposed

Senator Gale McGee of Wyoming has introduced a bill into the US Senate, asking for a 2-year ban on clear cutting on all National Forest Lands so that a study could be made of the overall effects of clear cutting. Please write to your Senators and ask them to support this bill.

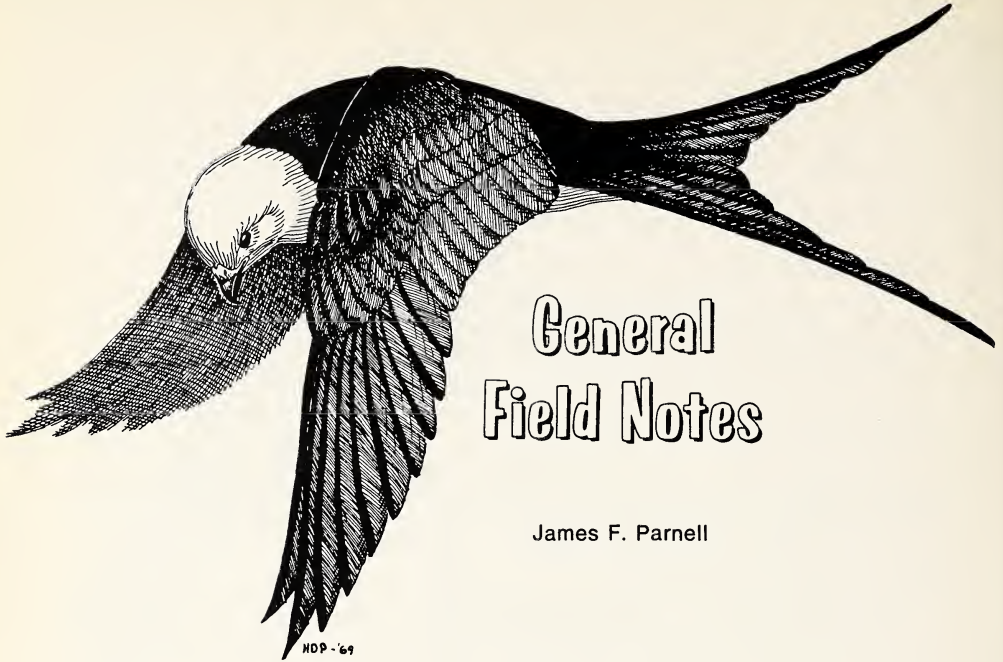
Quotable Quotes

"We have got to stop thinking of ourselves as being in the growth stage of civilization and realize that we are now in the mature stage. Up to now we have been a consumptive, destructive civilization. We must learn now to recycle and reuse." — Dr. Eugene Odum

"Man is neither good nor bad, but his own bungling self. That is why he is a blind actor on the environmental front." — Prof. Scott Gree

"Earth Week-E stands for Earth, Environment, and Ecological thinking. The key is still another E, Education." — adapted from *Southern Exposure*

"There are those who can live without wild things, and some who cannot. Like winds and sunsets, wild things were taken for granted until progress began to do away with them. Now we face the question whether a still higher 'standard of living' is worth the cost in things natural, wild and free. For us in the minority, the opportunity to see geese is more important than television, and the chance to find a pasque flower is as right and inalienable as free speech." — Aldo Leopold, in *Sand County Almanacs*



General Field Notes

James F. Parnell

Barnacle Goose at Pea Island, N.C.

FLOY C. BURFORD

6049 Lake Terrace Circle, Norfolk, Virginia 23502

14 December 1970

On 6 November 1970 several members of the Cape Henry Bird Club and the Hampton-Newport News Bird Club visited Bodie and Pea Islands, Dare County, N.C. Snow Geese were on both islands by the thousands. At the observation platform on Pea Island, while attempting to count Blue Geese among the Snows south of the dyke, we saw one bird that was totally different from the others. Naturally, we all reached for field guides. After studying the bird for several minutes and concluding it could only be a Barnacle Goose (*Branta leuopsis*) some eight or ten of the group walked about three-quarters of a mile down the dyke road to get a closer look. We crawled up the dyke and spotted the bird again, focused our scopes on it, and all agreed that it was a Barnacle Goose.

The following Friday, 13 November, W.F. Rountrey, Ed Ames, and I went back to Pea Island to check more closely. We finally spotted the bird with several Blue Geese. We were closer to the flock than the group was on 6 November. The feet and bill were black. Ed Ames remarked about the black stripe from bill to the eye. At a quick first look it resembled a brant or lesser Canada Goose, but the solid white face and white above the eyes, dark head and neck and white underparts convinced us that it could only be a Barnacle Goose.

The 1959 revision of *Birds of North Carolina* lists five prior occurrences of this bird in North Carolina. One of these observations was at Pea Island on 6 November 1949.

[There have been no published records of this species in North Carolina since 1950 when one was seen at Gaddy's Pond in Anson County.—DEPT. ED.]

High Altitude Occurrences of the Bobwhite In Western North Carolina

MARCUS B. SIMPSON JR.
P.O. Box 167, Statesville, N.C.

2 July 1970

At 4 PM on 29 June 1970, I flushed a covey of 12 Bobwhite (*Colinus virginianus*) at the summit of Spruce Mountain (5,647 feet), Haywood County, N.C. Three of the birds were flightless chicks, and I succeeded in capturing two of the young birds in the dense grass near the fire tower. The peak is surrounded with a forest of Fraser fir (*Abies fraseri*) and red spruce (*Picea rubens*), although there is an open, grassy area of about one acre near the summit. The presence of the young birds strongly suggests that the brood was raised in the immediate vicinity, thereby providing evidence of high altitude nesting.

My only other records from comparable elevations were made on 23 July 1968 near Yellowstone Prong, Graveyard Fields, Haywood County, N.C., at an elevation of 5,200 feet. Two birds were calling repeatedly from an early stage, second-growth forest of yellow birch (*Betula lutea*), red maple (*Acer rubrum*), and pin cherry (*Prunus pensylvanica*) bordering a grassy opening in the region devastated by the great fire of Thanksgiving Day 1925.

Pearson, Brimley, and Brimley (*Birds of North Carolina*, 1959) state that the Bobwhite occurs in suitable habitats in the mountain regions up to 5,000 feet in elevation, but no mention is made of specific records or whether the bird breeds at such altitudes. Stupka (*Notes on the Birds of Great Smoky Mountains National Park*, 1963) presents records from as high as 6,300 feet on Mt. LeConte in the Tennessee portion of the Great Smokies. He also states that the records of the bird above 3,500 feet are virtually limited to the period of May through August, when a ratio of 9:1 indicates the distribution below and above that elevation. To my knowledge, the only published report of chicks in the higher altitudes is also given by Stupka: a hen with four "half-grown" chicks noted on 24 and 25 August 1951 at Andrews Bald, Swain County, N.C., at an elevation of 5,800 feet.

Rejection of Tobacco Hornworm Moths By Laughing Gulls

PAUL A. STEWART
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Agricultural Research Service
USDA, Oxford, N.C.

29 January 1971

On Pamlico Sound during the spring and summer of 1969 I did research on over-water behavior of tobacco hornworm moths (*Manduca sexta*). On two different occasions one to two hundred of these moths were taken in a boat several hundred feet from shore where they were emptied from a cage onto the surface of the water. When on the surface of the water the moths soon started fluttering about and rising from the water. These fluttering and flying moths quickly attracted 50 to 75 Laughing Gulls (*Larus atricilla*). Although the gulls readily captured the moths, the moths were released without apparent injury before the gulls had flown 25 feet from the sites of capture.

Howell (*Florida Bird Life*, 1932) reported that Laughing Gulls feed on insects, including moths; however, Howell gave no information on either the nature or species of moths which are eaten. The tobacco hornworm moth is relatively large, with a wing spread of about 4 inches. As the moths were captured before they were rejected it would seem that they were rejected for a tactile or a gustatory characteristic, rather than a visual one.

High Altitude Records Of the Whip-poor-will In Western North Carolina

MARCUS B. SIMPSON JR.
P.O. Box 167, Statesville, N.C.

13 August 1970

Beginning at 1 AM on the morning of 15 May 1970, I listened for some 30 minutes to the steady calling of a Whip-poor-will (*Caprimulgus vociferus*) from the ridge just north of Pisgah Inn, Flat Laurel Gap, Transylvania County, N.C. at an elevation of 5,000 feet. Subsequently, on the morning of 24 May 1970, I examined the remains (head, feet, and wings) of a freshly killed Whip-poor-will south of Buck Spring, Pisgah Ridge, Haywood County, N.C. at an elevation of 4,950 feet. Both of these sites are heavily forested with a fairly mature second growth of deciduous trees, although the adjacent Blue Ridge Parkway has brought considerable opening of the forest cover and the creation of intensive edge conditions to the area.

To my knowledge, this is the highest elevation at which the Whip-poor-will has been recorded in North Carolina. Pearson, Brimley, and Brimley (*Birds of North Carolina*, 1959) gave no altitudinal data for the state, although Brewster (*Auk*, 3:94-112, 173-179, 1886) found the species fairly common up to 3,500 feet and present at 3,800 feet around Highlands, N.C. Stupka (*Notes on the Birds of Great Smoky Mountains National Park*, 1963) mentioned 3,000 feet as the approximate limit in the Asheville region. Additional field work is required to determine whether ecological conditions are suitable for the regular occurrence of this species above 3,500 feet in the mountain regions of North Carolina.

Red-cockaded Woodpecker Nesting In Wake County, N.C.

HARRY E. LeGRAND JR.
331 Yadkin Drive, Raleigh, N.C.

2 September 1970

On the evening of 9 May 1970, Joshua A. Lee reported to me that he had sighted a pair of Red-cockaded Woodpeckers (*Dendrocopos borealis*) and a hole of this species in extreme northern Wake County, N.C., late in 1968.

On 23 May 1970 I decided to take a trip to the area to see if the birds were still present. At the first stop, about 1.5 miles north of the Neuse River on NC Hwy 50, I saw a pair of adults and a hole in a live loblolly pine (*Pinus taeda*). One of the birds was flushed from the hole, 15 feet up, when I approached. No young were present. The habitat consisted of a fairly open stand of mature loblolly pines with an understory of smaller pines and hardwoods. The area had been burned over many years ago.

About a mile south of the first stop I made another stop and immediately spotted an old hole by the side of the road. I then heard young birds calling and found an active nest in a nearby pine. This nest was also 15 feet up in a live loblolly pine. An adult Red-cockaded Woodpecker fed the young four times while I was present. A second adult was nearby. The habitat was similar to the first site.

On 30 May Edmund LeGrand and I visited both locations and found no young. Two adults were at the northern site and one was present at the southern location. On 12 June Edmund LeGrand heard a young bird calling from the hole at the northern site, and two adult birds were nearby. One adult, but no young, was found at the southern location. Subsequent trips to the area have yielded no immature birds, and apparently both nestings failed.

A total of nine Red-cockaded Woodpecker holes have been found in addition to the two active nests.

Traill's Flycatcher Near Franklin, N.C.

MARY ENLOE

Route 1, Box 193, Franklin, N.C. 28734

On 18 June 1969 E.O. Mellinger came from Tiger, Georgia, to check the marshy areas at Lake Emory, near Franklin, N.C. At 8:30 AM as we walked the edge looking for shore birds on a wet island in the middle of the upper end of the lake, we heard the song of a Traill's Flycatcher (*Empidonax trailli*). I had heard it in 1962 in Johnson County, Tennessee, near the Virginia line, and recognized it. Mr. Mellinger was familiar with its song from hearing it in northern states where he grew up and later worked as biologist and ornithologist. We then walked to the lower end of the lake, about one-third of a mile away, and heard still another Traill's Flycatcher singing. In both instances they were singing from alder thickets. We could not check for nests since a boat was not available to go across to the marsh.

[The only recent North Carolina summer records of this northern flycatcher have come from Wendell Smith at North Wilkesboro. These records may indicate a more common occurrence in summer than is presently accepted.—DEPT. ED.]

Winter Wren at Low Altitude During Breeding Season

DOUGLAS PRATT

Box 22043 University Station, Baton Rouge, Louisiana

26 December 1969

The Winter Wren (*Troglodytes troglodytes*) is a common bird of the high altitude spruce-fir forests of the southern Appalachians. Its occurrence outside the spruce-fir zone is somewhat erratic, but singing birds are heard throughout the summer at lower elevations. The lowest such elevation that I have encountered was that of a bird heard singing repeatedly throughout the breeding season (until 14 August) at the trail crossing at Bradley Fork near Smokemont in the Great Smoky Mountains National Park. The exact elevation could not be determined, but it is definitely below 3,000 feet. The bird was also noted on several occasions at the same locality by Ranger-Naturalist Bill Alston. It gave a complete song characteristic of birds heard at higher localities.

Although no nest was found, the series of records from Bradley Fork strongly suggests that Winter Wrens may breed outside the spruce-fir zone in the Great Smoky Mountains.

Winter Record of American Redstart For Charleston, S.C.

DENNIS M. FORSYTHE

Dept. of Biology, The Citadel, Charleston, S. C. 29409

30 January 1971

On 1 January 1971 at 10:30 AM, while observing birds in Hampton Park, adjacent to The Citadel campus, Charleston, S.C., I saw a small bird feeding in a live oak (*Quercus virginiana*). Upon examination it proved to be a female American Redstart (*Setophaga ruticilla*). I observed all field marks in good light for about 5 minutes before the bird flew away. That afternoon I watched the redstart for 10 minutes as it foraged with a flock of Ruby-crowned Kinglets (*Regulus calendula*). Subsequent attempts to locate the bird were unsuccessful.

The normal winter range for the American Redstart does not extend further north than Cuba and Puerto Rico (*AOU Check-list of North American Birds*, 5th ed., p. 518-519, 1957). Although there are several winter records from southern Florida (*Audubon Field Notes*, 16:324, 1962; 20:415, 1966) and Louisiana (Lowery, *Louisiana Birds*, p. 556, 1955), the Charleston bird, to the best of my knowledge, represents the northernmost winter record for this species.

Lark Bunting at Pea Island, N.C.

FLOY C. BURFORD

6049 Lake Terrace Circle, Norfolk, Virginia 23502

14 December 1970

On 27 October 1970 my husband and I were on Pea Island going out to the observation platform when I noticed a dark junco-like bird with its back toward me. I gave a squeaking noise, and the bird jumped around to face me. It then flew about 3 feet to another low bush, showing the big white patches in the wings. I called to my husband to hurry back and see the Lark Bunting (*Calamospiza melanocorys*), and we called the bird out several times along with many juncos and sparrows. Seeing a Lark Bunting still in spring plumage was quite a start, but we both had excellent looks at the bird before it flew into a small live oak tree and refused to show himself again. The wind was blowing very strong and gusting up to 40 mph.

We have had several Lark Bunting records (five, I think) at Back Bay, Virginia, the last one in late August 1968.

[Two other sightings of this western bird have been made in North Carolina. One was just north of the current observation at Bodie Island on 2 September 1963 (*Chat*, 28:31-32).—DEPT. ED.]

White-crowned Sparrow Near Raleigh, N.C., in June

MICOU M. BROWNE

2728 Cambridge Road, Raleigh, N.C. 27608

January 1971

On 19 June 1969 I observed an adult White-crowned Sparrow (*Zonotrichia leucophrys*) at Lake Wheeler, Wake County, N.C. The bird was feeding in short grass near a boat house. All field marks were carefully checked. The bird was chased away by a Catbird (*Dumetella carolinensis*). An attempt to locate and collect the bird later was unsuccessful. Apparently this is the first June record for the state although there are many early May observations.

BRIEFS FOR THE FILES

Compiled by ROBERT P. TEULINGS

Route 2, Chapel Hill, N.C. 27514

(All dates are for the 1970-71 winter season.)

RED-NECKED GREBE - Two were sighted near the Hatteras Island, N.C., ferry landing on 25 December by Douglas and Elaine Kibbe.

HORNED GREBE - Unusual numbers were noted in early winter and late winter at Roanoke Rapids Lake in the northern piedmont section of North Carolina where 73 were counted on 20 December and 89 on 6 March by Merrill Lynch.

WHITE PELICAN - Three immatures were seen together in the vicinity of the Citadel, Charleston, S.C., 12 through 14 January by D.M. Forsythe and B.J. Kelley Jr.

WHITE-FRONTED GOOSE - One was seen at Savannah N.W.R. near Hardeesville, S.C., on 3 February by Marie Mellinger and Caroline Newhall.

BLUE GOOSE - A peak winter population of 400 was recorded at Mattamuskeet N.W.R. in Hyde County, N.C., in mid-January, as reported by Dan Benfield.

FULVOUS TREE DUCK - One was seen on 21 December at Magnolia Gardens near Charleston, S.C., and remained in the area for at least a month, Ted Beckett. Elsewhere, hunters were reported to have bagged 11 Fulvous Tree Ducks from a single flock near Delco in Columbus County, N.C., on 19 December. Two of the specimens were given to J.F. Parnell for the collection at the University of North Carolina at Wilmington.

EUROPEAN WIDGEON - A male was sighted among a raft of several hundred American Widgeon at Santee N.W.R. on 17 January by Dennis M. Forsythe and party. The specific location of this sighting was at Potato Creek impoundment south of Davis Station, Clarendon County, S.C.

LESSER SCAUP - An enormous flock estimated at more than 50,000 birds was concentrated in Charleston harbor on 23 January. Jay Carter watched the birds take flight en masse ahead of a nuclear submarine leaving the harbor.

OLDSQUAW - Inland occurrences were noted at Lakeview near Southern Pines, N.C., where an individual was observed on 9 January by Jay Carter, and at Roanoke Rapids Lake north of Roanoke Rapids, N.C., where Merrill Lynch found a single bird on 7 February and three on 21 February.

HOODED MERGANSER - Sizable numbers were present in late January through February at Roanoke Rapids Lake, where a peak of 93 was recorded on 31 January by Merrill Lynch.

COMMON MERGANSER - One was seen at Beaver Lake, Asheville, N.C., on 22 November by Robert C. Ruiz. Single birds were also found at Salem Lake near Winston-Salem on 7 January and 6 February by Ramona Snavely, Charles Frost, and Robert Witherington. At Raleigh, individuals were recorded on 12 December by Harry and Edmund LeGrand and on 26 February by T.L. Quay et al.

RED-BREASTED MERGANSER - An impressive inland count of 149 was recorded at Roanoke Rapids Lake near VEPCO dam on 28 March by Merrill Lynch.

MISSISSIPPI KITE - One was closely observed by Robert M. LaVal on 16 February in Charleston County, S.C., about 8 miles west of McClellanville. This sighting constitutes only the second winter record of this species for the state.

ROUGH-LEGGED HAWK - One was sighted near Durham, N.C., on 29 December by Norman Budnitz and party. This well-documented record, along with additional occurrences reported around the region during the Christmas count period (*Chat*, 35:21), indicated a significant and unusual winter influx.

MARSH HAWK - Jay Carter reported an unusual sighting of six birds simultaneously over a field near Marston in Richmond County, N.C., on 24 January.

PEREGRINE FALCON - R.M. LaVal reported an individual present through the winter at Cape Romain N.W.R. on the South Carolina coast.

GOLDEN EAGLE - One was seen in Francis Marion Nat'l Forest by Ted Beckett on 28 February. Beckett also reported seeing two birds regularly during the winter at Magnolia Gardens near Charleston, S.C.

BALD EAGLE - A wandering immature was recorded inland at Lake Benson near Raleigh, N.C., in early February by T.L. Quay and others. The bird was first seen on 6 February and lingered there for several days.

RAILS - At least 20 Yellow Rails and one Black Rail were observed after being flushed into view during the annual burn-off of grass at the Beaufort, N.C., airport on 17 February, as reported by John Fussell.

PURPLE SANDPIPER - A single bird was seen at Pawley's Island, S.C., on 3 February by F.M. Probst.

LONG-BILLED DOWITCHER - Twelve were seen and positively identified by their characteristic single-note call at Pea Island, N.C., on 30 January by Harry and Edmund LeGrand.

HUDSONIAN GODWIT - One was carefully identified at Pea Island on 27 February by Robert L. Ake and several members of the Cape Henry Bird Club. The bird was observed closely in flight as well as on the ground.

GLAUCOUS GULL - A second year bird was seen on the North Carolina coast several miles south of the Virginia border on 23 December by Robert L. Ake. Nine days later on 1 January an individual in similar plumage (same bird?) was found near the Bodie Island lighthouse by David Sonneborn and party.

GREAT BLACK-BACKED GULL - Increasing numbers are wintering along the South Carolina coast where the species was formerly rare. Repeated sightings were recorded during the 1970-1971 season at Pawley's Island by F.M. Probst, and seven were counted at Isle of Palms on 13 February by James Hebrard and Sidney Gauthreaux. Inland, two immature birds were found at Salem Lake near Winston-Salem, N.C., on 12 February by Charles Frost, Dwight Lee, Ramona Snavelly, and Robert Witherington.

LESSER BLACK-BACKED GULL - Two adults were found in the company of Ring-billed Gulls at Collington Harbor on Croatan Sound, N.C., 6 and 7 February by Henry Haberyan. Identification was based on the birds' similarity in size to the Ringbills and by their yellowish leg color. This constitutes the second sight record for the state.

BONAPARTE'S GULL - As many as 25 were seen inland at Lake Wheeler near Raleigh, N.C., on 5 and 6 February, Darryl Moffett, Donna Goodwin, Harry LeGrand, and Edmund LeGrand.

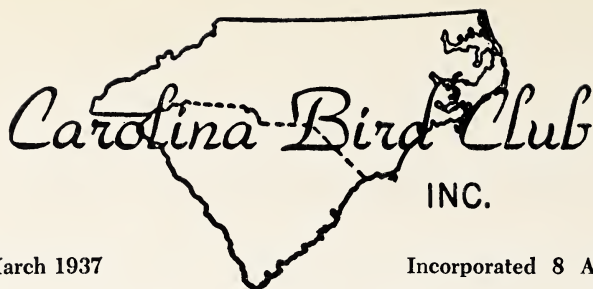
ALCIDS - The remains of two birds believed to be Razorbills were found at Oregon Inlet on 30 December by Mike Browne. Identification was made from wing parts recovered for museum examination. A Dovekie was also found dead at Oregon Inlet by Mike Browne on the same date.

LONG-EARED OWL - One was present through the winter at North Wilkesboro, N.C., where Wendell Smith regularly heard the bird's distinctive call.

WHIP-POOR-WILL - A lingering bird was heard at New London, N.C., in Stanly County as late as the third week in December by Naomi Goforth.

WESTERN KINGBIRD - One was positively identified at Roanoke Rapids, N.C., on 19 December by Merrill Lynch.

- SWAINSON'S THRUSH** - A bird was present out of season at Greenfield Lake in Wilmington, N.C., during the first week in February, reported by Edna Appleberry. Another was seen at a roadside park near Smithfield, N.C., on 10 February by Dwight Lee, Polly Lee, and Ramona Snavelly.
- BLACK-AND-WHITE WARBLER** - One at Roanoke Rapids, N.C., in the northern piedmont section of the region on 26 December was unusually late for that locality, Merrill Lynch.
- CAPE MAY WARBLER** - Terry S. Moore recorded a lingering individual near Beaufort, S.C., on 14 December.
- BREWER'S BLACKBIRD** - Two birds, a male and female, were seen near Moore's Landing on the South Carolina coast, 12 February, by Thomas H. Davis. This is one of very few records from the coastal section.
- BALTIMORE ORIOLE** - The wintering population ranged last season as far westward as Forsyth County in the North Carolina piedmont, as evidenced by a confirmed report of at least 7 winter residents at Winston-Salem, Ramona Snavelly.
- ORCHARD ORIOLE** - An adult male was present as late as 15 December at Hilton Head Island, S.C., Caroline Newhall.
- WESTERN Tanager** - A bird in winter plumage was observed closely in a yard at Roanoke Rapids, N.C., 11 February by Merrill Lynch.
- DICKCISSEL** - One was seen at a feeder in Clemmons, N.C., 26 March, immediately following a late-season snow storm, Margaret Gidley, Page Hill, and Fred Hill.
- EVENING GROSBEAK** - No significant invasion occurred in the Carolinas during the 1970-1971 season. In sharp contrast to the previous two winters, grosbeaks were scarce and in many places absent.
- HOUSE FINCHES** - Observed numbers of winter visitors were up at Raleigh, Chapel Hill, Greensboro, and Winston-Salem. At Greensboro, Mrs. I.W. Garrett recorded a flock of 37 at her feeder in mid-January. House Finches were reported for the first time in Beaufort County, N.C., at Washington (Ethel Barkley) and in Stanly County, N.C., at Albemarle and New London (Vivian Whitlock and Vera Crook).
- LE CONTE'S SPARROW** - One was carefully identified by John Fussell in the vicinity of Morehead City, N.C., on 29 November.
- LARK SPARROW** - A winter visitor was recorded at Wright Memorial, Kitty Hawk, N.C., on 30 January, Harry and Edmund LeGrand.
- SNOW BUNTING** - A single bird was seen at Sunset Beach, N.C., on 27 February by Evelyn Dabbs and Jay Carter.



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Incorporated 8 August 1949

Carolina Bird Club is an incorporated association for the study and conservation of wildlife, particularly birds, chiefly in the Carolinas. Founded in 1937 as the North Carolina Bird Club, it was joined in 1948 by several South Carolina natural history clubs and the name changed to the Carolina Bird Club.

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OUR COVER—Jack Dermid's photograph of a Royal Tern colony shows speckled eggs and downy chicks in the foreground. The drawing of Black Skimmers on page 85 is by John Henry Dick.

HIGH ALTITUDE RECORDS OF THE AMERICAN WOODCOCK IN THE GREAT BALSAM MOUNTAINS AND PISGAH RIDGE OF NORTH CAROLINA

MARCUS B. SIMPSON JR.

In a previous paper (Simpson, 1968) I summarized evidence that the American Woodcock (*Philohela minor*) occurs in high altitude regions of six major mountain ranges of North Carolina. Since that time a large number of sightings in the region of the Blue Ridge Parkway between Mt. Pisgah and Richland Balsam suggests that the bird is much more common at high elevations than is generally indicated in the literature. These records are from a 23-mile section of the Parkway through Pisgah Ridge and the Great Balsam Mountains, and the observations are based primarily on the call notes and courtship flight song as described in detail by Wade (1957) and Simpson (1968). The precise locale of each record is indicated by the milepost system utilized by the Parkway.

PISGAH RIDGE

Observations from this range lie along the crest of the ridge from Flat Laurel Gap (35° 24' N, 82° 45' W) to Tanasee Bald (35° 17' N, 82° 55' W).

1. PISGAH INN, FLAT LAUREL GAP - Haywood County - 4,900 feet - milepost 408.6.
11 May 1968 - 11 PM - 2 birds - "peent" notes and flight song (Simpson, 1968)
21 February 1970 - 9 PM - 1 bird seen - James Walters (pers. com.)
20 March 1970 - 9 PM - 1 bird seen - James Walters (pers. com.)
6 June 1970 - 7 AM - 2 birds seen - MBSJr.
8 June 1970 - 6 AM - 1 bird seen - MBSJr.
2. FRYINGPAN GAP - Transylvania County - 4,930 feet - milepost 409.6
14 May 1970 - 9:55 PM - 1 bird - "peent" notes and flight song - MBSJr.
3. GRAVEYARD FIELDS - Haywood County - 4,955 feet - milepost 418.8
5 June 1970 - 8:30 PM - 1 bird - "peent" notes - MBSJr.
4. BLACK BALSAM KNOB - Haywood County - 5,880 feet - 1.8 mi. NW of Graveyard Fields
24 July 1968 - 11 AM - 1 bird seen - MBSJr.
5. DEVIL'S COURTHOUSE - Haywood County - 5,460 feet - milepost 422.4
14 May 1970 - 12 midnight - 1 bird - flight song - MBSJr.
6. BEECH GAP - Transylvania County - 5,340 feet - milepost 423.2
15 July 1968 - 6 AM - 1 bird seen - MBSJr.

GREAT BALSAM MOUNTAINS

1. TANASEE BALD - Haywood County - 5,300 feet - milepost 423.7
11 April 1968 - 9:15 PM - 2 birds - "peent" notes and flight song - (Simpson, 1968)
12 April 1968 - 7:30 PM - 1 bird - "peent" notes and flight song - (Simpson, 1968)
10 May 1968 - 11 PM - 2 birds - "peent" notes and flight song - (Simpson, 1968)

- 15 July 1968 - 6:15 PM - 1 bird - "peent" notes and flight song - MBSJr.
 31 May 1969 - 9:45 PM - 1 bird - "peent" notes and flight song - MBSJr.
 13 June 1969 - 9:30 PM - 1 bird - "peent" notes and flight song - MBSJr.
2. HERRIN KNOB - Haywood County - 5,400 feet - milepost 424
 11 April 1968 - 9:45 PM - 2 birds - "peent" notes and flight song - MBSJr.
 13 June 1969 - 9:30 PM - 2 birds - "peent" notes and flight song - MBSJr.
3. BEARTRAIL RIDGE - Haywood County - 5,865 feet - milepost 430.4
 11 April 1968 - 11 PM - 2 birds - "peent" notes and flight song - (Simpson, 1968)
 10 May 1968 - 10 PM - 2 birds - "peent" notes and flight song - (Simpson, 1968)
 31 May 1969 - 10:10 PM - 2 birds - "peent" notes - MBSJr.
 14 May 1970 - 10:50 PM - 1 bird - "peent" notes - MBSJr.
4. COWEE MOUNTAINS OVERLOOK - Jackson County - 5,950 feet - milepost 430.7
 14 May 1970 - 11:10 PM - 1 bird - "peent" notes - MBSJr.
5. HAYWOOD-JACKSON OVERLOOK - Haywood and Jackson Counties - 6,020 feet - milepost 431
 31 May 1969 - 11 PM - 1 bird - "peent" notes and flight song - MBSJr.
6. RICHLAND BALSAM OVERLOOK - Jackson County - 6,040 feet - milepost 431.4
 10 May 1968 - 10:15 PM - 2 birds - "peent" notes and flight song - (Simpson, 1968)
 31 May 1969 - 12:30 AM - 1 bird - "peent" notes - MBSJr.
 23 May 1970 - 9 PM - 1 bird - "peent" notes and flight song - MBSJr.

DISCUSSION

A total of 41 observations of the American Woodcock are documented from the Blue Ridge Parkway in the region between mileposts 408.6 and 431.4. The mean elevation for these sightings is 5,709 feet, with a range of 4,900 to 6,040 feet. The records span the period from 21 February (1970) to 24 July (1968), with 1 from February (2.5%), 1 from March (2.5%), 7 from April (17%), 21 from May (51%), 7 from June (17%), and 4 from July (10%).

As discussed in detail in my previous paper (Simpson, 1968), this population influx probably represents a response to alterations in the vegetation pattern of the region. Sheldon (1967) states that the single critical factor in woodcock survival is competition for breeding and courtship sites. The woodcock requires display sites in an early stage of plant succession, with open areas of low, woody plants at a height of 1 to 5 feet, with adjacent regions of low herbaceous species. Furthermore, the height and proximity of surrounding trees must not impede the take-off flight of the displaying males. Marshall (1958) noted that woodcock will abandon a display territory when 60% of the vegetation reaches a height of 6 to 10 feet, while Sheldon (1967) indicated that almost all courtship sites presently utilized by the bird were created either directly or indirectly by man.

In the Pisgah Ridge and Great Balsam Mountain area, two factors, both due to man, may account for the creation and perpetuation of suitable display territories. As mentioned previously (Simpson, 1968), the creation of the Blue Ridge Parkway opened up sizable areas in the forest cover, while the policy of frequent mowing of shoulder vegetation creates a disclimax situation in which ideal courtship sites are maintained in a relatively static successional state. However, the records from Graveyard Fields and Black Balsam Knob indicate a second factor of importance, namely fire. On Thanksgiving Day 1925, a forest fire, probably ignited by a logging train, destroyed over

25,000 acres of Canadian zone forest in this region; and according to Lord (1963) the soil continued burning for over two weeks, thereby severely damaging the recovery potential of the vegetation. Consequently, much of this area has developed into grass balds or open, grassy areas with scattered, low shrubs; Catawba rhododendron (*Rhododendron catawbiense*), serviceberry (*Amelanchier laevis*), mountain laurel (*Kalmia latifolia*), blueberry (*Vaccinium* sp.), and mountain winterberry (*Ilex montana*). The severe soil damage has thus created an ecological situation favorable to the behavior requirements of the woodcock and allowed its perpetuation in these high elevations.

In my earlier paper (Simpson, 1968), I noted that many of the records were adjacent to regions of Fraser fir (*Abies fraseri*) and red spruce (*Picea rubens*), but I pointed out that this association might be coincidental. The present data indicate that such is the case. The numerous records from Pisgah Inn, Fryingpan Gap, Graveyard Fields, and Black Balsam Knob are far removed from these forests; and the sightings from areas adjacent to the Canadian zone woodlands are therefore probably due to the local impact of the Parkway on the ecology of the region.

To date, there are no records of nests or young birds from this area, so the possibility of a breeding population remains unsubstantiated. Critcher and Quay (1953) have pointed out that the presence of displaying males is no guarantee of female presence or nesting. However, on 24 May 1942, Tanner (1942) discovered a nest containing 4 eggs at 6,000 feet on Roan Mountain, Mitchell County, N.C. This nest, located on an open grassy rhododendron bald, remains the only evidence that the species nests at such elevations.

SUMMARY

A total of 41 records of the American Woodcock from elevations of 4,900 to 6,040 feet in the Great Balsam Mountains and Pisgah Ridge indicate a sizable high altitude population, although no evidence of breeding in these ranges has been found. The creation of static display territories by the Blue Ridge Parkway and forest fires probably account for the extent of the population in the region.

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P.O. Box 167, Statesville, N.C., 2 July 1970.

RECOVERIES OF ROYAL TERNS BANDED IN THE CAROLINAS

WILLET T. VAN VELZEN

Thirty years ago John Grey (1940) wrote a lively account of an expedition to band Royal Terns (*Thalasseus maximus*) on Green Island, south of Oregon Inlet, N.C. Harold S. Peters had prompted the expedition stressing that the recoveries would be both of value and interest. Since that date, thousands of bands have been placed on Royal Tern chicks in the Carolinas, and much has been learned about the population dynamics and dispersal patterns of this outstanding bird. Readers of the *Chat*, however, have not been treated to much news concerning the results of this banding except for eight recovery locations given for terns banded near Ocracoke, N.C. (Davis, 1961). These recovery locations are shown in Figure 1. Until such time as more information may be presented, this paper will give some idea of the dispersal pattern of these terns after they leave their nesting areas.

In 1964, in conjunction with the study of colonial species by T.A. Beckett III, I banded a sample of 979 Royal Terns out of 5,070 banded on Deveaux Bank, near Charleston, S.C. To date, 2% (21) of the bands have been recovered. This recovery rate is nearly the same as that received from 1,559 Royal Terns banded in Virginia during 1964 and 1965 (Van Velzen, 1968).

Table 1. Recoveries of Royal Terns banded on Deveaux Bank, S.C.

Band No.	Date Banded	Date Recovered	Recovery Location	How Obtained**
615-87535	14 June 1964	30 Dec. 1964	Clearwater, Fla.	26
-87572	"	02 Dec. 1964	Matheson Hammock, Fla.	56
-87575	"	25 Jan. 1965*	Sebastian Inlet, Fla.	47
-87645	"	22 Jan. 1965	Englewood, Fla.	47
-87698	"	12 April 1965	Sarasota, Fla.	47
-87765	"	13 April 1965*	St. Petersburg, Fla.	47
-87814	"	11 Nov. 1966	Uribia, Guajira, Colombia	59
-87816	"	10 March 1965*	off Ft. Meyers Beach, Fla.	52
-87837	"	15 Dec. 1964	Santo Domingo, D. Repub.	28
-87872	"	20 Dec. 1964*	Boca Grande, Fla.	47
-87918	"	07 Dec. 1964*	Clearwater, Fla.	26
-87927	"	14 Sept. 1964	Savannah, Ga.	47
-88039	13 June 1964	13 Sept. 1964	St. Simons Light, Ga.	56
-88055	"	15 Sept. 1964*	Yulee, Fla.	47
-88072	"	19 Jan. 1968	New Smyrna Beach, Fla.	47
-88250	"	01 May 1965*	Treasure Island, Fla.	26
-88293	"	15 March 1965	off Sarasota, Fla.	34
-88334	"	28 Nov. 1967	Crescent Beach, Fla.	47
-88364	"	30 Jan. 1965	off Tavernier, Fla.	26
-88435	"	15 Dec. 1964	Fort Pierce, Fla.	47
-88453	"	07 March 1969	Samana Bay, Dom. Repub.	59

*Letter date only.

**How Obtained Codes:

26 Entangled in fishing gear	52 Injured
28 Caught by hand	56 No information
34 Eaten by fish	59 Shot
47 Found dead	

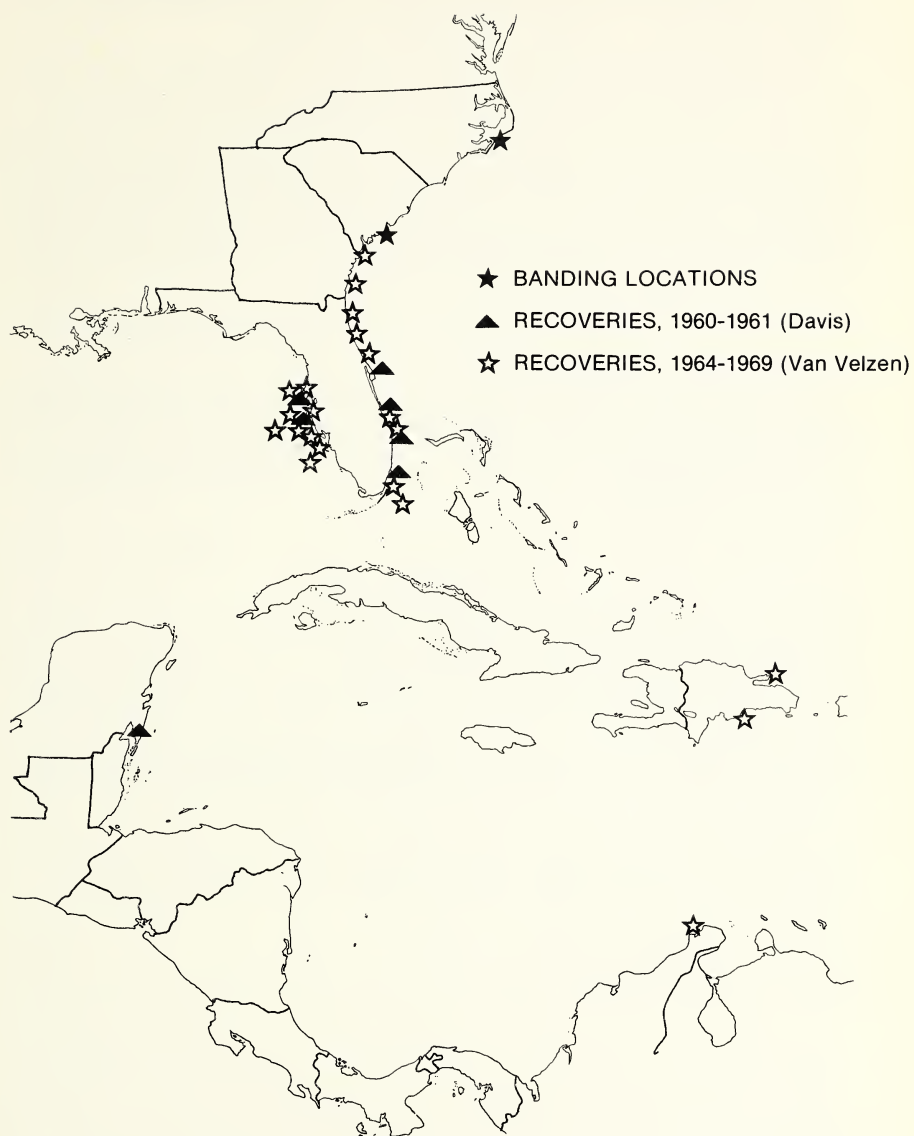


Figure 1. Recovery locations of Royal Terns banded in the Carolinas (excluding Ecuador and Peru).

The majority of recoveries were received during the first fall and winter following banding. Most of the recoveries came from Florida (Figure 1), indicating that a good proportion of the South Carolina birds winter in that area. Only three reports were received from areas outside the United States: two from the Dominican Republic and one from Colombia.

The distribution pattern shown by these recoveries is quite similar to that of the Royal Terns banded in Virginia. From a total of 46 recoveries received by the author, 17 came from Florida, 6 from other points along the Atlantic coast of the United States, 11 from the Caribbean, and 12 from Central and South America. Davis (1961) received recoveries from Mexico and Ecuador, and two of the Virginia terns were found as far south as the coast of Peru. These recoveries suggest a movement across Central America and down the *western* coast of South America. Although Royal Terns are found along the eastern coast of South America as far south as Argentina, Escalante (1968) suggests that these birds do not originate from the Caribbean or the coast of the United States, but likely breed somewhere in the Southern Hemisphere.

Half of the birds recovered were reported as found dead. The next largest number (4) were entangled in fishing gear. The remainder were recovered by miscellaneous means, as shown in Table 1. Of special interest was the recovery of one bird from the stomach of a Tiger Shark caught in the Gulf of Mexico (Van Velzen, 1966).

To date, the oldest bird recovered from the Virginia and South Carolina bandings discussed above was 4 years 9 months of age. Sprunt and Chamberlain (1949), however, mention a South Carolina Royal Tern recovered 10 years 8 months after banding.

Details concerning the 21 recoveries of South Carolina Royal Terns banded by the author are given in Table 1.

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Migratory Bird Populations Station, Laurel, Maryland 20810, 5 November 1970.

1970 BIRD NESTING STUDY AT WILLIAM B. UMSTEAD STATE PARK, WAKE COUNTY, N.C.

HARRY E. LeGRAND JR.

During the summer of 1970 I made a study of the breeding bird populations at William B. Umstead Park, Wake County, N.C. My main objective was to determine the habitat relations of the nesting species by a series of breeding bird censuses. Much of my time, however, was spent in studying the overall nesting populations. Seven species were given special attention either because of their rarity in the Park or in the rest of Wake County.

SPECIES OF PARTICULAR INTEREST

Black Vulture (*Coragyps atratus*)--On the evening of 10 April Edmund LeGrand and I found a nest of this species in the central part of the Park. The nest site was an approximately one-half acre clearing surrounded by pine and mixed woods. The clearing was evidently at one time the site of a residence but is now densely covered with brambles, vines, and bushes.

The nest was a cleared area on the ground in the midst of a thick mat of vines and small shrubs. Two eggs were in the nest, which was under the overhang of a vine-covered bush. An adult, probably the female, flushed from the nest before we reached it. The bird flew to the top of a small tree 50 feet away and calmly watched us examine the nest. This behavior was repeated on every trip made to the nest until late May. Between 28 February and early April both adults were seen in the area, and their presence at this most unusual location (at least a mile from the nearest open country) made me believe a nest was in the area.

On 18 April Robert J. Hader saw the two eggs, and on 22 April he and Eugene Hester observed two young birds, which were photographed by Dr. Hester. For the next several months I made weekly visits to the nest. By early June the nestlings had well-developed wing feathers but otherwise were covered with buffy down. The young also had made tunnels among the vines that provided protection but made watching them difficult. By late June the young were full-grown and perhaps making small flights around the nest. Not until 13 July did I actually see a young out of the nest. It was in a nearby tree and was fully plumaged except for a buffy crown, a few down feathers on its head, and a gray-tipped bill.

Since the eggs hatched about 20 April and the offspring were ready to leave the nest by the end of June, about 70 days were required to fledge the young. Bent (1937) has little data on the number of days in which the young gain the ability to fly, but one record gives 66 days as the age at the time of first flight. In my case the young remained at the nest for at least 12 weeks (84 days), whereas anywhere from 60 to 74 days is the normal age for the young to leave the nest (Bent, 1937).

Broad-winged Hawk (*Buteo platypterus*)--On 2 July I found a nest of this species about 50 feet up in a loblolly pine (*Pinus taeda*) in an otherwise dry hardwood forest. I was drawn to the nest by the call of a bird, which I found to be a juvenile. On 8 July I saw three juveniles, all able to fly well, but I never saw an adult on the five trips made to the nest. However, I often saw adults at nearby Boathouse Lake, around which they probably did much of their feeding.

Solitary Vireo (*Vireo solitarius*)--This species is strictly a bird of rather mature pinewoods (preferably loblolly pine) at the Park. In fact, at Umstead only the Solitary Vireo and the Pine Warbler (*Dendroica pinus*) are limited to this type of habitat in the breeding season. This summer I noted about 15 singing males in the Park, but only a few

of these birds appeared to have a mate. I found a Solitary Vireo nest on 12 June, 35 feet up in a loblolly pine. The female was incubating at the time, and the male was singing nearby. On 20 June the female was still incubating, but by 23 June the nest had been abandoned. At another location in the Park I saw an adult carrying food, but I did not see a young bird at the time.

Solitary Vireos are fairly common summer residents at the Park, but they are uncommon elsewhere in northern and western Wake County. They are probably rare in the southern and eastern parts of the county. There are several nesting records for the county, one of which is as far east as Wakefield, a small town located 1 mile N of Zebulon (Pearson et al., 1942).

Worm-eating Warbler (*Helminthos vermivorus*)—On 16 June I saw one bird in the understory of a deciduous lowland forest. Since I had worked the area heavily on many occasions before 16 June, I feel that the bird was just a transient or wandering summer visitor. I saw no other Worm-eating Warblers in the Park this summer.

Worm-eating Warblers have not been found nesting in Wake County. However, this summer Robert Soots (pers. com.) saw one in mid-July at Raven Rock State Park in Harnett County; he believes this bird was a transient. Elizabeth and Robert Teulings (1966) banded a pair of this species in Durham County in late June 1965. At present, Worm-eating Warblers may be considered rare to very rare nesters (away from the mountains) south to Iredell, Orange, and Bertie Counties (Pearson et al., 1959).

Scarlet Tanager (*Piranga olivacea*)—This summer the highest population ever was recorded for the Scarlet Tanager, not only in the Park, but elsewhere in Wake County. At Umstead, males were common in almost every type of woods, but they preferred mature mixed woods. I saw only about five females, indicating that many or most of the males were unpaired. The first nesting of this species in Wake County was recorded on 9 June, when I observed a female feeding a fledgling on several occasions in a deciduous lowland forest along Crabtree Creek. I found no nests of this species in the Park.

Scarlet Tanagers were found at many locations in Wake County this summer, and they were also common at Raven Rock State Park in western Harnett County (Robert Soots, pers. com.). It may now be said that the Scarlet Tanager is an established summer resident in North Carolina east to northwestern Wake County and western Harnett County (LeGrand, 1970).

Red Crossbill (*Loxia curvirostra*)—It is now well documented that this species staged the most extensive flight on record into North Carolina during the winter of 1969-1970. However, it was quite a surprise to me and several other birders in the State to find that all of the crossbills did not leave along with the departure of the other winter finches. Instead, a few remained, and at Umstead State Park I noted birds on seven dates (maximum of four birds on 5 June) as late as 17 June. They were usually flying and calling overhead, but I did see two perched on one occasion in a tree top. I also saw a male and female, possibly mated, in northern Wake County on 23 and 30 May.

The Red Crossbill is an erratic but usually early nester (Bent, 1968). Eggs are often laid in March, and Hader (1969) states:

"The next published record is 12 March to 6 May 1967 when from one to eight were seen regularly; P.W. Sykes Jr. collected an adult male, an adult female, and an immature female on 6 May. The adult female contained a fully formed egg and another about half developed. The immature was examined at the US National Museum by Roxie Laybourne and estimated to be about 5 weeks old. There is a good possibility it had hatched in Wake County (pers. com. from P.W. Sykes Jr.)."

Since I saw birds at Umstead until mid-June, I believe that one or two pairs may have nested there; however, their restlessness and the lack of singing suggest non-breeding. Also, their departure in mid-June, presumably to the north or west, confuses matters. Is it possible that a few birds could nest on their wintering grounds in the spring and then

return to their normal breeding grounds to spend the rest of the summer? The answer may be "yes."

Bachman's Sparrow (*Aimophila aestivalis*)—Two males were present all summer just outside the Park at the Raleigh-Durham Airport. Both possibly were mated. In mid-April both male and female of one pair were seen, but no females were seen afterwards. Both males sang often from scattered pine saplings, but they were shy and disappeared when I approached them. I spent about five hours searching unsuccessfully for a nest or young of this species. However, since Bachman's Sparrows have been present at this location for at least the past four summers, they almost certainly nest here. No other presently known nesting locations have been reported in Wake County, though a few birds are recorded on some of Raleigh's spring counts.

GENERAL BREEDING ACTIVITY

I recorded breeding evidence for a total of 45 species. In the majority of instances young birds just out of the nest were seen and heard begging for food. Because I began work well after the nesting season had begun, in late May, I found only 19 nests. Four nests were of Acadian Flycatchers (*Empidonax vireescens*), indicating that they were one of the latest nesting species at the Park. A Yellow-billed Cuckoo (*Coccyzus americanus*) was seen carrying food on 5 September, and the fact that I saw no young cuckoos at all during the summer indicated that these birds may have nested in July and August, for the most part. Also, cuckoos sang much more commonly in late summer than early summer. American Goldfinches (*Spinus tristis*) were the latest nesters of the Park's breeding birds, but the only young bird I saw was one with its parents on 21 September.

The nesting activity for the summer resident species reached a peak in late May, and by early June most of the young birds were beginning to leave the nest. The first broods of the permanent resident species had mostly been reared by the time I started work in late May. Young of second broods were seen from late June to mid-July. After mid-July the singing of many species declined considerably; and a few species, such as the Ovenbird, Yellow-throated Warbler, and Prairie Warbler, were hard to find after this time.

A total of 90 species were recorded in the Park between 28 May and 15 August. Approximately 70 species nested or probably nested in the Park. About 15 species were recorded in the Park but probably nested outside its boundaries. The following were believed to be in this category: Turkey Vulture, Red-shouldered Hawk, Sparrow Hawk, Chimney Swift, Red-headed Woodpecker, Horned Lark, Barn Swallow, Purple Martin, Fish Crow, Mockingbird, Robin, Loggerhead Shrike, Starling, Orchard Oriole, and Common Grackle. The following species were transients: Great Blue Heron, Little Blue Heron, immature night heron, Spotted Sandpiper, and Black-and-white Warbler.

Several species that are fairly common or common nesters in Wake County were not recorded in the Park on this study. They were: Killdeer, Chuck-will's-widow, Common Nighthawk, House Wren, Prothonotary Warbler, Yellow Warbler, and House Sparrow.

DISCUSSION AND RECOMMENDATIONS

Since my main objective was to study the nesting bird populations, in particular the habitat relations of them, I believe the best period for this type of study is from mid- or late-May to mid-August. My study covered nearly all of this period (28 May to 15 August). On the other hand, I believe a study of bird nests and related breeding activities should begin in March and run through July. A study of nesting populations should not, however, begin before May because many individuals of nesting species are migrating through the area in the spring.

SUMMARY

A study of the nesting species and populations at William B. Umstead State Park, N.C., was made during the summer of 1970. Seven species recorded on this study were

either rare in the Raleigh area or in Umstead State Park. Nesting activity reached a peak in late May and early June. Of the 90 species recorded, about 70 nested in the Park.

ACKNOWLEDGMENTS

This study was supported by a National Science Foundation award (Grant No. GY-7279) to the School of Forest Resources at North Carolina State University, under the direction of T.E. Maki. My immediate supervisor was T.L. Quay of the Department of Zoology. Dr. Quay assisted with the preparation of the manuscript, which was also read by R.J. Hader, Robert Soots, and Elizabeth Teulings. Dr. Hader, Gilbert Grant, and Edmund LeGrand made several observations at the Park that were helpful to the project.

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331 Yadkin Drive, Raleigh, N.C., 4 April, 1971.



Conservation

. . . with Marie Mellinger

A Reverence for Life

The title for this column comes from several editorials sent out by W.G. Duncan. From *Out of My Life and Thought*, he quotes Albert Schweitzer, "A man is ethical only when life, as such, is sacred to him, that of plants and animals as that of his fellow man, and when he devotes himself helpfully to all life that is in need of help. . . . The idea of reverence for life offers itself as a realistic answer to the realistic question of how man and the world are related to each other." And from *Sand County Almanac*, "Men are only fellow-voyagers with other creatures in the odyssey of evolution. This new knowledge should have given us, by this time, a sense of kinship with other creatures, a wish to live and let live; a sense of wonder over the magnitude and duration of the biotic enterprise."

In a plea to save the bullfrogs, Rufus M. Reed wrote, "Our planet earth must never become a cold dead ball of rock with silent poisoned streams. When the bullfrogs are gone with pollution we who lived with them in childhood shall miss their booming." Add to bullfrogs, all the little creatures of the woods and water, frogs, salamanders, turtles, and snakes. The *Anderson Independent* added its note with an editorial "Please don't catch the turtles. We're losing enough of our wildlife, so let the turtles alone, leave them in their natural surroundings."

News and Notes

Bob Teulings has earned special praise for a well planned meeting of CBC and GOS. The paper session with emphasis on scientific bird studies and conservation was especially good. If more of the large crowd attending the joint meeting would have listened to the papers, they would have found much to interest them and start them thinking.

In a study made by the US Geological Survey, Sugar Creek, near Fort Mill, S.C., had the largest concentration of arsenic (1,100 micrograms per litre), far above the 50

microgram limit set by the Public Health Service. Cape Fear River and the Catawba River in North Carolina had concentrations of 60 micrograms of arsenic per litre. These figures from the *Conservation News*, 4-15-1971.

The controversy over Smith (Bald Head) Island still rages, and the ultimate fate of the island is still in doubt. Governor Scott has asked for support to bring the island into public ownership, but most of the legislators appear to favor private development. There is still time to make your opinions known. James F. Parnell and David A. Adams have prepared a *Resource Capability Study of Smith Island* that should be a must reading for all.

Rep. Bryan Dorn of South Carolina is spearheading a campaign for a cross Georgia barge canal from Clark Hill Reservoir to the Tennessee River. This would drastically change a large number of Georgia rivers and should be thoroughly studied by ecologists before such a plan is put into effect.

The Tennessee Valley Authority is getting ready to build 14 earthen dams on the French Broad River and its tributaries. This is being opposed by the Upper French Broad Defense Association, the Sierra Club, and the Conservation Council of North Carolina.

The US Department of Interior is sponsoring Johnny Horizon, a sort of super-ranger to help sell the public on conservation, and especially on cleaning up camp grounds and recreation areas. Any group can become a sponsor of the Johnny Horizon program by writing Johnny Horizon Program Coordinator, Dept. of Interior, Washington, D.C. 20240.

Regional hearings are being held on bills offered in the US Senate and the House of Representatives to regulate timber-cutting practices. Attend these hearings if possible, or write to your senators and congressmen.

Autumn is a time of nostalgia for most people, a time of longing for the "good old days," but rather than bemoan the lost crystal springs of childhood, it should be a time of up and doing. Don't just talk about litter, or pollution, or the evils of clear cutting, do something about them. Concerted effort by enough concerned individuals can accomplish much.

Carolina Birds and Birders

. . . with Willie Morrison

Finding Birds and Plants with the Mellingers

PAUL A. STEWART

From the sill of the window of their bedroom the Whip-poor-will bids them goodnight and greets them on their morning awakening; the Pileated Woodpecker exchanges gratitude with them as they jointly partake of their meals on opposite sides of their kitchen window; the Swainson's Warbler delivers his territorial song almost within ear range from their front porch, challenging them to try to find his nest in the rhododendron thicket. Upon his retirement from the US Fish and Wildlife Service in 1968, E.O. (Mel) Mellinger and his wife, Marie, chose to become neighbors of these willing birds in Rabun County, Georgia, just outside the Chattahoochee National Forest. Here they found contact with nature much more intimate than the contact found by so many people only through their television sets. Twenty species of bird visitors have been recorded at their feeders, visitors required to yield only their photographs.

In Rabun County the Appalachian folds have pushed skyward to form the Blue Ridge, with Rabun Bald at 4,676 feet above sea level being the second highest peak in the Georgia portion of the Appalachians. Here Mel and Marie can see certain natural features of their native Ohio and Wisconsin, respectively, in only short walks from their home. Here many northern birds reach the southern limits of their breeding range. The Mellingers' list of nesting warblers found in Rabun County contains 22 species, including the following: Black-and-white, Swainson's, Worm-eating, Golden-winged, Blue-winged, Parula, Yellow, Black-throated Blue, Black-throated Green, Blackburnian, Yellow-throated, Chestnut-sided, Pine, Prairie, Kentucky, Hooded, and Canada. Also included are the Ovenbird, Louisiana Waterthrush, Yellowthroat, Yellow-breasted Chat, and American Redstart. Other northern birds nesting in Rabun County include the Broad-winged Hawk, Common Raven, Veery, and Solitary Vireo.

And no less than the birds, the trees and plants invite the naturalist to see their disjunct islands in Rabun County. Here the Georgia Botanical Society makes annual pilgrimages for the privilege of treading on high trails through hemlock forests over moss-covered rocks. Here the Moccasin Flowers and Showy Orchis grow in all of their splendor.

Similar to a Cottontail's network of trails through his brier patch, the forest across the road from the Mellinger home is crisscrossed with well-worn trails, unmistakable signs of the presence of a forest creature in adjustment with his environment. Here Mel in 1971 for his third successive year made for publication in *American Birds* (formerly *Audubon Field Notes*) a breeding bird census of a 15-acre block of mountain forest. Here the minimum requirements for a breeding bird census are being substantially exceeded.

Having found her place in the ecosystem, Marie pursues an active program of helping other people to a similar discovery. As Park Naturalist she serves the Georgia Department of State Parks in conducting nature hikes and in presenting slide programs at Tugaloo

(Continued on Page 88)

[illegible]

Downy Woodpecker	277	16	15	6	7	5	2	3	6	6	1	4	4	23	25	43	32	25	16	1	2	5	8	22
Red-cockaded Woodpecker	27	1	5	9	8	2	11	9	87	9	83	26	4	30	10	35	27	5	18	14	1	1	—	—
Eastern Kingbird	567	3	1	18	119	52	12	14	26	6	*	6	3	36	3	42	21	*	20	8	1	1	5	5
Great Crested Flycatcher	448	23	49	28	101	48	12	14	26	6	1	4	4	11	11	13	15	6	8	2	2	—	29	
Eastern Phoebe	109	*	---	---	---	---	3	1	3	3	1	---	---	21	*	3	14	*	19	1	---	---	7	
Acadian Flycatcher	94	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Trail's Flycatcher	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Least Flycatcher	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Eastern Wood Pewee	147	*	---	5	35	9	1	5	8	1	---	1	---	7	*	44	12	1	6	2	---	1	10	
Horned Lark	23	---	256	85	1,445	15	120	---	---	2	---	6	---	23	14	4	3	2	1	---	---	---	7	
Tree Swallow	1,999	16	---	---	---	---	---	---	---	3	---	---	---	---	---	---	---	---	---	---	---	---	---	
Bank Swallow	52	---	---	---	---	---	---	---	12	3	---	---	---	---	---	---	---	---	---	---	---	---	---	
Rough-winged Swallow	227	7	16	19	7	14	5	4	10	4	11	6	---	33	7	10	13	6	4	1	6	1	37	
Barn Swallow	1,651	30	484	122	228	54	55	9	2	12	12	---	5	182	21	106	52	174	2	16	5	10	63	
Chiff Swallow	14	22	56	---	---	228	15	22	27	4	2	12	6	43	10	103	93	250	13	14	25	2	---	
Purple Martin	999	35	156	26	106	99	14	26	82	22	42	17	62	253	96	274	175	235	128	30	15	47	22	
Blue Jay	2,081	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	119	
Common Raven	6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	224	
Common Crow	1,008	30	64	6	67	15	11	46	25	2	16	11	10	66	39	76	51	202	35	5	5	2	---	
Fish Crow	356	116	135	43	24	15	---	---	10	10	---	---	---	13	48	75	81	108	62	4	5	9	75	
Carolina Chickadee	908	22	23	11	54	32	14	5	26	8	10	2	7	103	48	73	72	117	67	22	13	17	71	
Tufted Titmouse	915	26	63	20	58	34	9	7	16	15	7	8	10	99	72	83	72	117	67	22	13	17	71	
White-breasted Nuthatch	108	---	---	---	---	---	---	---	---	---	*	---	---	3	10	14	24	8	3	---	2	1	25	
Red-breasted Nuthatch	4	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	*	
Brown-headed Nuthatch	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Brown Creeper	262	20	18	5	53	5	---	3	4	8	*	1	2	21	17	38	16	32	16	1	2	---	---	
House Wren	---	1	6	2	2	---	---	1	1	1	1	---	6	18	3	9	14	14	16	---	6	7	3	
Bewick's Wren	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2	
Carolina Wren	637	27	96	13	84	17	2	12	20	8	14	7	9	67	41	58	38	45	37	6	8	12	4	
Long-billed Marsh Wren	---	18	17	7	27	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Short-billed Marsh Wren	---	1	2	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Mockingbird	1,695	81	96	41	45	63	23	42	80	23	46	23	71	153	64	300	132	217	106	15	4	31	39	
Cardinal	399	14	29	32	27	29	1	4	19	8	4	2	12	46	5	65	31	62	28	6	4	3	10	
Brown Thrasher	924	44	91	47	57	75	5	9	37	9	25	8	50	68	35	87	57	122	23	10	9	32	1	
Robin	2,306	4	51	---	---	7	47	6	83	77	39	55	111	259	83	333	277	395	115	40	15	77	20	
Wood Thrush	731	*	6	1	18	14	2	14	13	14	3	4	28	122	40	179	104	67	57	12	4	11	16	
Hermit Thrush	32	7	6	4	1	1	---	---	1	2	---	---	---	5	1	18	1	1	5	---	---	---	4	
Swainson's Thrush	47	1	---	---	---	---	---	---	1	*	---	---	---	---	---	---	---	*	---	---	---	---	---	
Gray-cheeked Thrush	10	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Veery	37	---	---	---	---	---	---	---	---	4	---	---	---	9	1	5	2	---	3	---	---	---	1	
Eastern Bluebird	350	2	5	3	21	13	---	16	2	3	---	12	2	11	47	42	22	85	11	6	11	11	25	
Bluegray Gnatcatcher	452	42	26	15	87	3	4	3	12	24	1	4	1	69	45	7	45	12	29	1	4	1	17	
Golden-crowned Kinglet	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Ruby-crowned Kinglet	109	15	3	4	14	---	---	---	---	5	7	---	2	10	16	1	15	9	7	---	1	2	5	
Water Pipit	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Cedar Waxwing	829	33	258	126	4	---	---	---	4	8	---	23	4	84	32	27	89	23	68	---	6	---	37	
Loggerhead Shrike	---	2	---	---	---	---	---	---	---	2	2	5	9	7	8	14	2	20	8	1	---	---	---	
Starling	5,237	169	661	31	35	197	49	250	390	87	109	100	148	315	71	1,015	212	500	276	20	18	93	481	
White-eyed Vireo	---	27	34	34	77	---	---	---	---	4	5	4	2	24	29	3	5	2	18	3	2	5	13	
Yellow-throated Vireo	140	2	14	3	12	4	3	1	2	8	---	1	5	22	15	25	6	1	9	---	3	1	---	
Solitary Vireo	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Red-eyed Vireo	20	12	31	15	98	---	---	---	25	18	7	6	6	177	88	91	46	17	67	8	1	6	---	
Philadelphia Vireo	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	

SPRING BIRD COUNT — 1971

ELOISE F. POTTER

Where Carolina Bird Club census figures are concerned, records are made only to be broken. The total number of species tallied on the 1971 Spring Bird Count was 259, five more than the record set last year. Wilmington alone listed an almost unbelievable 186 species, followed by the other three coastal counts: Morehead, 167; Southport (a new count area encompassing Smith Island), 166; and Charleston, 162. Inland Winston-Salem and Raleigh had outstanding counts with 134 and 131 species respectively.

While the 259 species do not include any first records for the Carolinas, several are worthy of comment. The Eared Grebe (Southport) is the fourth record for the Carolinas and the first known spring occurrence (*Chat*, 23:62, 30:25, 32:20). The King Eider (Southport) also appears to be the first spring record for that species in the Carolinas. Baird's Sandpipers have occurred in spring several times in South Carolina (*South Carolina Bird Life*, 1970, p. 242 and 599), but the four reported from Wilmington are the first known spring migrants for North Carolina. While Painted Buntings are not new to Eastover, the 11 found on the present count plus two from Stanley County suggest that an unusually large number may have visited the central Carolinas this spring. See compilers' comments for details of these and other species of special interest.

COMPILERS' COMMENTS

MOREHEAD CITY, N.C. (center 1 mile NW of Phillips Island in lower Newport River).

17 April. The early count date is probably responsible for the occurrences, absences, or changes in numbers of many species. A few *White Ibis* are now resident in the lower Newport River area. A pair of *Common Mergansers* were on Newport River where Don McCrimmon and Bob Soots compared them with nearby Red-breasted Mergansers. *Broad-winged Hawk* (Harry LeGrand, John Wright) found near Mill Creek is rare in this area. *Red-breasted Nuthatch* and *Solitary Vireo* (H. LeGrand, J. Wright) were also at Mill Creek where they had been seen earlier by compiler.—JOHN O. FUSSELL III, Box 520, Morehead City, N.C.

WILMINGTON, N.C. (center Myrtle Grove Junction).

24 April. The number of *Anhingas* is the largest ever reported. Polly Mebane saw the *Black Rail* on Bradley Creek at a distance of 8 feet. *Baird's Sandpipers* (Jack and Eloise Potter) were at Orton. Field marks seen at close range include small size (about same as Swamp Sparrow), scaled backs, dark legs, absence of white in wing in flight, and upper breast streaked as in the much larger Pectoral Sandpiper. John Fussell and Harry LeGrand saw the *Wilson's Phalarope* at close range on mudflats at Carolina Beach; white rump patch seen in flight. *Trill's Flycatcher* (Edna Appleberry, Greg Massey) was singing from a large sweet gum tree in a small swamp at Echo Dairy Farm. Massey has seen and heard this species in the mountains.—FRANCES NEEDHAM, P.O. Box 204, Wrightsville Beach, N. C.

SOUTHPORT, N.C. (center Battery Island, Brunswick County).

25 April. *Eared Grebe* (J.F. Parnell, Elaine and Doug Kibbe) was viewed on water at 50 to 100 yards with 8X binoculars. Bill shape, head pattern, and dark neck were carefully noted by Parnell, who had previously seen and photographed the species at Wrightsville Beach (*Chat*, 30:25). The bird was about half way between winter and summer plumage. *King Eider* (J.F. Parnell, Jack and Eloise Potter, Doug and Elaine Kibbe, John Fussell, Frank McBride) was a first year male seen 200 to 300 yards offshore in a flock of about 75 scoters. Although heat waves restricted visibility, the dark back, white breast, white flank patches, general head shape, and reddish bill could be seen through the 30X scope. Other species unusual for the area included a *Magnolia*

Warbler (J.H. Carter III), *Louisiana Waterthrush* (Doug Kibbe), and *Rose-Breasted Grosbeak* (Harry LeGrand).—J.H. CARTER III, Box 891, Southern Pines, N.C.

CHARLESTON, S.C. (center 14 miles NE of Mt. Pleasant and ½ mile E of Hwy 17).

25 April. This year's count was held about a week earlier than in 1970, which probably explains some of the transient species missed last year. In certain cases, such as the Eastern Kingbird and the White-throated and Savannah Sparrows, the larger numbers of individuals this year undoubtedly reflect delayed migration. Kingbirds were commonly seen in local aggregations of 10 or more. *Upland Plovers* were seen by W.F. Robey, J.R. Gauthey, and Mr. and Mrs. Eric Cooper.—JULIAN R. HARRISON, Biology Department, College of Charleston, Charleston, S.C. 29401.

BEAUFORT COUNTY, N.C. (center where Upper Goose Creek enters Pamlico River).

9 May. *Black-crowned Night Heron* (Geraldine Cox) was flying and calling.—GERALDINE COX, Route 1, Box 115, Merritt, N.C. 28556.

PAMLICO COUNTY, N.C. (center in Florence at 1324 and 1329 intersection).

2 May. *Glossy Ibis* is first record for this part of the county. *Yellow Warbler* appears on our count for the first time.—MARVIN TURNAGE, Route 1, Box 25, Bayboro, N.C. 28515.

ROCKY MOUNT, N.C. (center Battleboro).

9 May. The number of Turkey Vultures (14) is relatively good for our area.—JOHN L. THOMPSON, 500 Evergreen Road, Rocky Mount, N.C. 27801.

FAYETTEVILLE, N.C. (center Methodist College).

6 May. *Grasshopper Sparrow* seen by Henry A. Rankin Jr. and compiler represents first definite record for area.—JOHN S. BUTLER JR., P.O. Box 3512, Fayetteville, N.C. 28305.

SOUTHERN PINES, N.C. (center 3 miles NE of Southern Pines at Niagara).

29 April. *Black-crowned Night Heron*, Long-billed and Short-billed Marsh Wrens were seen by compiler. *Black Tern* (count period, JHC) is third spring record for area.—J.H. CARTER III, P.O. Box 891, Southern Pines, N.C.

DILLON, S.C. (center Dillon).

1 May. *Pectoral Sandpiper* (JHW) was at a rain pond 18-28 April. The pond was formed by over 5 inches of rain that fell the first two days of March, and it was visited by many shore birds until it went dry 5 May. At this pond on one day were 8 Greater Yellowlegs, 14 Lesser Yellowlegs, 18 Solitary Sandpipers, 1 Least Sandpiper, 6 Common Snipe, and 17 Blue-winged Teal.—JOHN H. WILSON, Box 535, Dillon, S.C. 29536.

EASTOVER, S.C. (center Eastover).

10 May. The number of *Painted Buntings* (11) is relatively large for our area.—KAY C. SISSON, 1617 Tanglewood Road, Columbia, S.C. 29204.

HENDERSON, N.C. (Henderson).

1 May.—MARY FRANCES CHAVASSE, 225 Orange Street, Henderson, N.C. 27536.

RALEIGH, N.C. (center Norfolk and Southern RR crossing, Lake Wheeler Road).

1 May. Migration peaked about one week after the count date. We added 30 species for the count period, most of them seen in the week after the count. Winter residents were not included unless seen on or after count day. The *Clay-colored Sparrow* seen by Harry LeGrand is one of the very few records of this species for North Carolina. Details are being forwarded to the General Field Notes editor.—R.J. HADER, 3313 Cheswick Drive, Raleigh, N.C.

CHAPEL HILL, N.C. (center at Columbia and Franklin Streets).

25 April. Our species total of 113 was rather good considering the early count date and late migration. Most noteworthy were the species we missed (Acadian Flycatcher, Wood Pewee, Kentucky Warbler) or nearly missed (Indigo Bunting, 1). All but a few of our 23 count period species were seen after 25 April. The three *Cerulean Warblers* were located by song and carefully studied by Judy and Jim Deaton. Most of the shorebirds (JOP) were at a small, partly drained farm pond.—JAMES O. PULLMAN, Route 6, Box 149 Chapel Hill, N.C. 27514.

GREENSBORO, N.C. (center at Radio Station WBIG near NW edge of city).

8 May. Reddish crown and single breast spot of *Tree Sparrow* were seen clearly at home feeder by Frank L. Fish and others. Etta Schiffman and others studied the *Sanderlings* along with other shorebirds. The species is unusual in our area, mostly occurring in early fall. *Blue-winged Teal* were found at upper Lake Brandt both before and after count day by Etta Schiffman and Jean F. Gertz.—THOMAS E. STREET, 411 N. Spring Street, Greensboro, N.C. 27401.

WINSTON-SALEM, N.C. (center intersection of I-40 and Silas Creek Pkwy).

1 May. *Traill's Flycatcher* (Janice Levitt) was singing "witch-brew" song; seen and heard at close range. *Nashville Warbler* is a regular if uncommon spring migrant. Six birds were seen this year at Winston-Salem during the count period. *Connecticut Warbler* (Ruth Hill, Susan Moore) was watched closely at eye level; gray hood and eye-ring noted. *Wilson's Warbler* (Ramona Snavelly) was a male. *Lincoln's Sparrow* (Ramona Snavelly, Ruth Hill, others) was studied closely for nearly 20 minutes.—C. ROYCE HOUGH III, 713 Lankashire Road, Winston-Salem, N.C. 27106.

STANLY COUNTY, N.C. (center about 2 miles NW of Badin).

24 April. *Cattle Egret* was seen Tuesday before count. Rough-legged Hawk was seen over Tucker Town Lake by Harold Morris and Barrett Crook. Barrett and Vera Crook studied one at same lake 15 April 1968. Pair of *Painted Buntings* was seen by Grace Morris in her yard in the Brickyard area. Cowbirds are increasing.—MRS. BARRETT CROOK, New London, N.C. 28127.

CHARLOTTE, N.C. (center at South Boulevard and Woodlawn Road).

1 May. *Osprey* (Mrs. W.G. Cobey) was an excellent find. *Pileated Woodpecker* (Mrs. Jerry Lee) has been frequenting suburban yards in northwestern Mecklenburg County. There was obviously a heavy wave of Myrtle Warblers. White-crowned Sparrow (Olin Wearn) is seldom reported in this area. As usual, some fairly common species were missed, and some uncommon ones reported, i.e., the Northern Waterthrush (David Wright) was seen, but not the Louisiana.—MR. AND MRS. JOSEPH R. NORWOOD, 1329 Goodwin Avenue, Charlotte, N.C. 28205.

GREENVILLE, S.C. (center intersection Hwy 29 and 291).

1 May.—ROSA LEE HART, Route 1, Travelers Rest, S.C. 29690.

ELKIN-RONDA, N.C. (center 2 miles N of Elkin on US 21).

24 April. *Osprey* was seen by Wendell P. Smith and Fred Masten Jr. Garvin Hughes, Virginia Hart, and compiler saw the *Tree Sparrow*.—LIN HENDREN, Box 148, Elkin, N.C. 28621.

CALDWELL COUNTY, N.C. (center Lenoir).

28 April. *Least Sandpiper* was a good find.—HELEN MYERS, 310 Beall Street, Lenoir, N.C. 28645.

AVERY COUNTY, N.C. (center Grandfather Mountain Golf and Country Club entrance).

6 May. Rough-winged Swallow was seen by Mrs. Reber Boulton of Nashville, Tennessee. Rose-breasted Grosbeaks were unusually numerous for this time of year.—MRS. RICHARD PROCTOR, 381 Westview Drive, Winston-Salem, N.C. 27104.

BUNCOMBE COUNTY, N.C. (center 300 Wilson Avenue, Swannanoa).

24 April. Adult *Little Blue Heron* (Mark Hall, Walter Hall, RCR) at Lake Tomahawk was unusual since this species occurs here mostly in immature plumage. Greater Yellowlegs (Walter Hall, Anne Hesterley) was also at Lake Tomahawk where Jane Holt saw one on 9 May. *Philadelphia Vireo* (John, Joseph, Joy and Joyce Hall) was in Fairview area.—ROBERT C. RUIZ, 300 Wilson Avenue, Swannanoa, N.C. 28778.

OBSERVERS

MOREHEAD CITY, N.C.: Buzzy Bryson, Scott Clark, Martha Farmer, Tom Fisher, J.O. Fussell Jr., J.O. Fussell III, Karen Griffin, R.J. Hader, Will Hon, Edmund LeGrand, Harry LeGrand, Charles Lincoln, Don McCrimmon, Eugene Pond, T.L. Quay, Bob and Mary Simpson, Bob Soots, Anne Sprinkle, Robert Strider, Bob and Elizabeth Teulings, Sam Weatherly, Pete Willis, John Wright.

WILMINGTON, N.C.: Katharine Alexander, Edna Appleberry, Bobby Austin, Joyce Bennett, Jay Carter, Dot Earle, John Fussell, Bill Greene, Douglas Kibbe, Elaine Kibbe, Kitty Kosh, Edmund LeGrand, Harry LeGrand, Greg Massey, Polly Mebane, Prissy Mebane, Frances Needham, Carl Newhaus, Mary Newhaus, Anne Nicholson, Jim Parnell, Eloise Potter, Jack Potter, Pete Roberts, Mary Ulrich.

SOUTHPORT, N.C.: Edna Appleberry, J.H. Carter III, John Fussell, Doug and Elaine Kibbe, Edmund LeGrand, Harry LeGrand, Frank McBride, Frances Needham, James F. Parnell, Jack and Eloise Potter.

CHARLESTON, S.C.: Roy E. Baker, T.A. Beckett III, Edwin L. Blitch, Mrs. Frances H. Brewster, E.C. Clyde, Mrs. R.H. Coleman, Mr. and Mrs. M. Teague Coleman, David Coleman, Mr. and Mrs. Eric Cooper of Montreal, Canada, John H. Dick, J.R. Gauthey, Julian R. Harrison, S.C. Langston, Robert M. Laval, I.S.H. Metcalf, Terry Moore, Edward W. Murray, Anne-Marie C. Noe, Perry E. Nugent, W.F. Robey, Bill Sonzogni.

BEAUFORT COUNTY, N.C.: John Althouse, Ethel Barkley, Mrs. Ralph Brown, Geraldine Cox, Louise Gamble, Rhoda Koshak, James McLaurin, Mary McLaurin, Polly Rowlett, Louise Satterthwaite, Elizabeth Sterling, Hugh Sterling, Stuart Thompson, Ellis Turnage, Marvin Turnage, Mary Wilson.

PAMLICO COUNTY, N.C.: Geraldine Cox, Marvin Turnage.

ROCKY MOUNT, N.C.: Joyce Bennett, J.W.E. Joyner, E. Carr Speight, Sarah Speight, Harvey Thomas, John L. Thompson.

FAYETTEVILLE, N.C.: Mrs. John W. Baluss Jr., John S. Butler Jr., Mrs. Jonathan E. Courtney, Mrs. Neill A. Currie Jr., Mrs. Charles T. Haigh, Charles T. Haigh, Jr., Charles T. Haigh III, Claude W. Rankin Jr., Henry A. Rankin Jr., Mrs. S.C. Rankin, Mrs. John A. Shaw, Jamie Stewart.

SOUTHERN PINES, N.C.: Eleanor Carter, J.H. Carter III, L.M. Goodwin Jr., Mary K. Wintyen, Ethel Wotton, Leslie Wotton.

DILLON, S.C.: Mrs. R.A. Brady, Lois McCallum, Marion McCallum, Rick McCallum, John H. Wilson, Johnny Wilson.

EASTOVER, S.C.: Annie R. Faver, Kay C. Sisson.

HENDERSON, N.C.: Neita Allen, Mr. and Mrs. A.W. Bachman, Sarah Boyd, Annie Grey Burroughs, Mary Frances Chavasse, Mrs. Walter Dallas, Mrs. S.R. Harris Jr., May Hunter, Mrs. Russell Parham, Dr. and Mrs. Paul A. Stewart.

RALEIGH, N.C.: Vance Anderson Jr., Vance Anderson III, Mike Browne, Isabella Cannon, Ella and Pete Chalfant, John Fussell, Charlotte Hilton Green, Dorothy Grigg, Ray and Jeanne Halsey, Mrs. James D. Hunt, Mabel Jones, Mr. and Mrs. William Joslin, Mr. and Mrs. John Lamson, Mr. and Mrs.

J.A. Lee, Edmund LeGrand, Chris and Lisa Marsh, Edna Miller, Dr. and Mrs. T.L. Quay, Kathy Schwertman, Edith Shanklin, Mary Showalter, J.T. Still Jr., Ruth Swain, Gwen and Melynda Turbiville, Gail Whitehurst, Mr. and Mrs. Michael Wilcox, Harriet Wilson, Ida Lee Winkler, John Wright.

CHAPEL HILL, N.C.: Annie Leigh Broughton, Judy and Jim Deaton, Bob and Flo Geist, C.S. George, Joel and Linda Hornstein, Russ and Belle Hoverman, Dr. and Mrs. J. Irvin Logan, Steve and Penny Kahler, B. Lerner, Trudy London, Pat, Owen, David and Jimmie McCullen, Wallace Patterson, Johnnie Payne, James O. Pullman, Wiley Sanders, Wilma Stuart, Robert and Elizabeth Teulings.

GREENSBORO, N.C.: Dr. and Mrs. Donald F. Allen, Rose K. Avery, Inez Coldwell, Larry Crawford, Mrs. G.W. Daniels, Mr. and Mrs. Frank L. Fish, Jean F. Gertz, H.H. Groover, Sidney Holmes, Mrs. Clarence Knight, Col. and Mrs. B.H. Lambeth, Mrs. R.E. McCoy, Ida Mitchell, Mrs. G.F. Norcross, Mrs. David Parsons, Mrs. G.W. Perrett, Etta Schiffman, Mrs. W.D. Seawell, Mrs. A.D. Shaftesbury, Mrs. Paul B. Stam, Thomas I. Street, Mr. and Mrs. W.J. Tays, Mrs. D.G. Tipton, Mrs. R.H. Weisner, Maude Williams, Helen J. Zuk.

WINSTON-SALEM, N.C.: Fran Baldwin, Olive Boice, William Boice, Pat Culbertson, Becky Deaton, Charles Frost, Gardner Gidley, Margaret Gidley, Fred Hill, Page Hill, Ruth Hill, Royce Hough, Janice Levitt, Ann Listokin, Susan Moore, David Schuler, Jackie Shelton, Dorothy Shiffert, Jerry Shiffert, Corky Smith, Ramona Snively, C. Sommer, Edith Spinks, Robert Witherington.

STANLY COUNTY, N.C.: Tommy Lee Barnes, Roy Blalock, Erin Blalock, Jack Carnegie, Margaret Crawley, Barrett and Vera Crook, Pauline Culp, Mary Crump, Nelle Dotson, Ollie Easter, Claude Eudy, Frances Eudy, Nina Eudy, Joe Ferrebee, Melba Ferrebee, Virginia Foglio, Rudy Gereg, Mattie Gereg, Naomi Goforth, Terry Hahn, Edward Harris, Lectie Harwood, Bill Hatley, Anne Hatley, Beverly Honeycutt, Jean Honeycutt, Myrtle Isenhour, Louise Johnson, Janie Kimrey, Vera Littleton, Susan Manly, Fisher Maner, Wilmetta Maner, Doris Mauney, Anne Misenheimer, Harold Morris, Grace Morris, Helen Mount, Lela McJunkin, Ann Olsen, Mary Palmer, Spencer Plyler, Jennie Ruth Plyler, Nickolas Reinhardt, Nana Sweacker, Addie Thompson, Ethel Trantham, Frankie Treadaway, John and Vivian Whitlock, Bennie Winget.

CHARLOTTE, N.C.: Mr. and Mrs. M.J. Barber, Mrs. Edwin O. Clarkson, Mrs. E.R. Clewis, Mrs. W.G. Cobey, David Cone, Mr. and Mrs. A.H. Dykema, Mr. and Mrs. J.P. Hamilton, Mrs. Herbert Hampton, Mrs. A.A. Kittinger, Mrs. Jerry Lee, Mrs. Thomas L. Millwee, Jim Nesbit, Mr. and Mrs. J.R. Norwood, Mrs. Preston Nowlin, William S. Sayward, William Smith, Olin Wearn, David Wright (Mecklenburg Audubon Society, guests).

GREENVILLE, S.C.: Mary Austin, Ruth Gilreath, Gladys Hart, Lillie Hart, Rosa Lee Hart, Mr. and Mrs. W.R. Lawrence, May Puett.

ELKIN-RONDA, N.C.: Virginia Hart, David Hasse, E.M. Hodel, Lin Hendren, Ola Hendren, Garvin Hughes, Louise Hughes, Fred Masten Jr., Beverly Masten, Lewis Petree, W.P. Smith, Jerry Tysinger, Bobby Tysinger.

CALDWELL COUNTY, N. C.: Mrs. W. E. Alexander, Miriam Bachar, Mrs. Glen Barnes, Isabel Bernhardt, Edna Bruner, Mrs. Horace Craig, Mrs. James Gossler, Margaret Harper, Lois Laxton, Mr. and Mrs. E.M. Manchester, Helen Myers, Mrs. C.S. Warren.

VERY COUNTY, N.C.: Mrs. Reber Boulton, Mrs. Mark Griffin, Mrs. James Martin, James Plymire, Mrs. Richard Proctor, Sallie Southerland.

BUNCOMBE COUNTY, N.C.: Bill Duyck, John Hall, Joseph Hall, Joy Hall, Joyce Hall, Mark Hall, Walter Hall, Anne Hesterley, Jane Holt, Gordon Mahy, Betty M. Ruiz, Robert C. Ruiz, Charles Smith Jr., Helen Vick, Horace Vick.

ON VACATION

No General Field Notes appear in the September *Chat* because the department editor was in Alaska when the deadline arrived. Jim Parnell promises readers an unusually large number of notes for the December issue, which will also feature Jay Carter's species list of the birds of the central Sandhills of North Carolina.—EFP



BRIEFS FOR THE FILES

Compiled by ROBERT P. TEULINGS
Route 2, Chapel Hill, N.C. 27514

(All dates 1971 unless otherwise indicated)

RED-NECKED GREBE - A late bird, still in winter plumage, was at Huntington Beach State Park, S. C., on 23 May, Frederick Probst.

SOOTY SHEARWATER - Three were observed $\frac{1}{4}$ mile offshore at Pea Island, N. C., on 22 May by Gilbert Grant.

SNOWY EGRET - Single birds were found inland at Raleigh on 27 April and 5 May by Mike Browne and Robert Hader.

GLOSSY IBIS - An early flock of 47 was at North River Marsh in Carteret Co., N. C., on 12 March, John Fussell.

OLDSQUAW - One to three were inland at Roanoke Rapids Lake near Roanoke Rapids, N. C. between 4 April and 23 April, Merrill Lynch.

COMMON MERGANSER - One was seen on 11 March and two on 25 March in the Winston-Salem area by Charles Frost, Robert Witherington, and Ramona Snively. On 10 April, a flock of six was found at Lake Benson near Raleigh by Robert Hader.

ROUGH-LEGGED HAWK - One was sighted near Durham on 1 April by Mrs. Paul S. Payne.

BLACK RAIL - Charles Bennett closely observed a migrant at Greenview Farm near Raleigh on 23 April.

- PURPLE GALLINULE** - In May of 1966, children at Woodlawn Elementary School in North Wilkesboro, N. C., found a Purple Gallinule snared in the school's playground fence. Their teacher, Mrs. M. J. Ingram, recognized the fatally injured bird as unusual and preserved it after it died. Mark Simpson and Wendell Smith recently examined the mounted specimen and made details of the record known. Few previous occurrences have been reported from the interior of the state and this apparently is the westernmost record.
- SEMPALMATED PLOVER** - Inland an early spring transient was found at Chapel Hill, N. C., on 17 March by Russell Hoverman. A late migrant was seen at North Wilkesboro on 21 May by Wendell Smith.
- AM. GOLDEN PLOVER** - Frederick and Renee Probst found one at Huntington Beach State Park, S. C., on 31 March.
- WHITE-RUMPED SANDPIPER** - One was at West Onslow Beach, N. C., on 30 April, Gilbert Grant.
- SEMPALMATED SANDPIPER** - Inland two were seen on 27 April and 10 on 16 May at Raleigh where the species is regarded as a rare spring transient, Mike Browne, Harry LeGrand, and Edmund LeGrand.
- LESSER BLACK-BACKED GULL** - One was carefully studied at Oregon Inlet on 2 April by David Sonneborn and Don Backe, the third sighting on the North Carolina Outer Banks since the species was first recorded there in December 1968.
- LAUGHING GULL** - Single birds were found inland near Winston-Salem on 6 May by Charles Frost and at Roanoke Rapids Lake on 30 May by Merrill Lynch.
- BONAPARTE'S GULL** - Surprisingly large numbers appeared during spring at Roanoke Rapids Lake, where as many as 138 were seen in mid-April, Merrill Lynch.
- COMMON TERN** - Several were seen during the latter half of April at Roanoke Rapids Lake by Merrill Lynch.
- CASPIAN TERN** - A flock of nine at Lake Wheeler near Raleigh on 29 April was unusual at this inland location, Edmund and Harry LeGrand.
- BLACK TERN** - A single bird was at Whispering Pines, N. C., on 8 May, Jay Carter.
- YELLOW-BELLIED FLYCATCHER** - One was late and unusual at Ringwood, Halifax County, N. C., on 23 May, Merrill Lynch.
- BANK SWALLOW** - An early transient was at Whispering Pines on 27 March, Jay Carter.
- PURPLE MARTIN** - The first bird of the season was unusually early at Raleigh on 19 February, Joshua Lee.
- PHILADELPHIA VIREO** - Wendell Smith recorded a scarce spring migrant at North Wilkesboro on 4 May.
- WARBLING VIREO** - Individuals were seen near Durham on 12 April by Mrs. Paul S. Payne and on 8 May by James Pullman.
- WORM-EATING WARBLER** - An early transient was found near Eastover, S. C., on 7 March by Ted Beckett and Stan Langston.

- NASHVILLE WARBLER - One was seen near Durham on 7 May by Mrs. Paul S. Payne.
- MAGNOLIA WARBLER - One was rather late at Southern Pines, N. C., on 26 May, Jay Carter.
- BLACK-TH. BLUE WARBLER - A late transient was seen at Chapel Hill on 31 May, James Pullman.
- CERULEAN WARBLER - Single birds were seen near Durham on 5 May by Mrs. Paul S. Payne and at Raleigh on 9 May by Harry and Edmund LeGrand.
- CHESTNUT-SIDED WARBLER - A late spring migrant was banded by Charles Blake at Hillsborough, N. C., on 30 May.
- YELLOW-BREASTED CHAT - An individual was present at R. M. Geist's feeder in Chapel Hill during the second week of March.
- CONNECTICUT WARBLER - Several sightings of this rare spring migrant were made in the piedmont section of North Carolina. One was seen on 7 May near Durham by Mrs. Paul S. Payne, on 9 May at Winston-Salem by Sue Moore, and on 27 May at Charlotte by Lee Jones.
- WILSON'S WARBLER - One was seen on 6 May at North Wilkesboro by Wendell Smith, and three were observed at Raleigh between 10 and 17 May by Harry LeGrand.
- CANADA WARBLER - One was late and unusual at Weymouth Woods Sandhills Nature Preserve near Southern Pines on 26 May, Jay Carter.
- BALTIMORE ORIOLE - Four migrants were on the coast at Knotts Island, N. C., on 9 May, Gilbert Grant.
- ROSE-BREASTED GROSBEAK - Three males and two females were found on the coast at Bodie Island, N. C., on 1 May by Frank B. Aycock Jr.
- PAINTED BUNTING - A hardy individual that wintered at Southern Pines, N. C., was last seen there on 12 April, Jay Carter.
- DICKCISSEL - Individuals were seen near Durham on 20 April by Mrs. Paul S. Payne; at Litchfield Beach, S. C., on 4 May by Frederick Probst; and at Raleigh on 9 May by Harry and Edmund LeGrand.
- HOUSE FINCH - Most of the wintering birds left North Carolina in late March and early April, but at Winston-Salem 75 House Finches were counted in Tanglewood Park on 24 April by Gardner Gidley and 2 were seen in that area as late as 16 May by Royce Hough.
- GRASSHOPPER SPARROW - Three were heard singing on territory at Roanoke Rapids airport, Halifax Co., N. C. on 29 May by Merrill Lynch.
- VESPER SPARROW - A transient was found unusually late at Roanoke Rapids on 29 May, Merrill Lynch.
- LINCOLN'S SPARROW - An individual in emaciated condition was trapped by Elizabeth Teulings at her banding station in Durham County east of Chapel Hill on 9 May. The sick bird did not survive and has been preserved as a specimen.

CAROLINA BIRDS AND BIRDERS

(Continued from Page 73)

and Black Rock State Parks. In addition, Marie is the current president of the Georgia Botanical Society and a past president of the Georgia Ornithological Society.

Truly, the Carolina Bird Club is fortunate that Marie has seen fit to crowd into her busy schedule the preparation of the Conservation section of *The Chat*. However, coming from her abundance of living as Marie's conducting of this Conservation section does, actual preparation of the material is undoubtedly much less of a chore for her than it would be for a more normal and lesser spirit. From her busy typewriter unnumbered manuscripts on nature continue to flow to grace the pages of *Castanea*, *South Carolina Magazine*, *South Carolina Wildlife*, *Virginia Wildlife*, and *National Parks* on subjects from fungi to Bobwhite foods, all illustrated by Mel. And when in the Mellinger's secret ravine I looked at the thriving Oconee Bells, a rare plant which had been rescued from advancing dam flood waters, I could see that we can read a message coming from feeling as well as knowing.

With Marie as chairwoman, the Mellingers are working on a committee of the Georgia Conservancy making a biological survey of the Chattahoochee National Forest. This project was organized in November 1969, and it is the committee's goal to preserve wilderness areas and stop encroachments of roads and other similar developments.

Indeed, the Mellingers can make enviable lists of the birds and plants to be found near their home, and they can assure their naturalist visitors of being able to see birds and plants to support his or her fondest expectations. But more than that, the Mellingers have captured for themselves and can impart to others much of the spirit of that great philosopher from Walden Pond: they travel a great deal when sitting on their front porch. Without the details being specifically stated, one can see with them beyond the names to the purposes of the birds and plants. Even as I sat there with them I could hear the whisper of the nearby trees telling of the Mellingers' oneness of ecological purpose with them.

203 Mooreland Drive, Oxford, N.C. 27565.

White Birds Outdraw Golf at Hampton Club

The possibility two baby albino Loggerhead Shrikes are being raised on the golf course has the Hampton County Country Club in an uproar.

Hampton golfers now are talking about the all-white birds, not one-under-par, when they discuss birdies. They don't yell fore, but they do yell two, when the birds are spotted between Holes 17 and 18, and golfers lay their clubs aside long enough to watch the unusual birds.

The young birds are friendly and allow golf carts to roll up for close observation. Golf course manager Buddy Pulaski was able to show them to a Hampton bird enthusiast, Don Parker, who tentatively identified them.

Local birdwatchers have been keeping vigil in the late afternoons when the parent birds fly in to feed the young. The parent birds have been definitely identified as Loggerhead Shrikes. The young were apparently hatched in a nest in a hedgerow by the country club fairway.

The young birds are approximately seven inches long, sparsely feathered around the neck and have beady black eyes. They are solid white, shaped like a Mockingbird, with slimmer, shorter tail and flatter head.—MARTHA BEE ANDERSON, Hampton, S.C.

REQUEST FOR INFORMATION: SANDERLING

During the autumn migration of 1971, the Long Point Bird Observatory hopes to band and colour-mark several hundred Sanderling at Long Point, Ontario. Information on the movement of these birds away from Long Point will facilitate research presently underway on the energy requirements of their migration. We would appreciate it if everyone sighting these birds would report their observations to:

Long Point Bird Observatory,
269 Beta Street,
Toronto 14, Ontario, Canada.

The following information would be appreciated:

Date and time of observation

Location, including nearest city or town

Colours: note--birds will be coloured on the breast and the abdomen with two of the following colours: red, orange, pink, purple, yellow, green, blue, brown, black, and white (no colour).

Leg that has been banded: this will tell if the bird is an adult or an immature.

Any other information on what other birds are with the marked individuals would be very useful.

HERONRY LOCATIONS REQUESTED

At the top of the aquatic food-chain, the Great Blue Heron may well be an important indicator species. The Laboratory of Ornithology is planning a nation-wide survey of this species.

The first step will be to compile an inventory of heronries. To this end, we appeal to all readers with knowledge on this point to write to us. Information may be recent or old; detailed or sketchy. Even "I remember seeing a heronry as a boy" is helpful if the site is remembered well enough to locate on a topographic map.

We hope that this inventory will contain the exact locality of the heronry, a general description of the site, and as much history as possible. We hope that this stage of the program can be completed by the winter so that arrangements can be made for census work in the 1972 breeding season.

David B. Peakall, Ph.D.
Senior Research Associate
Cornell Laboratory of Ornithology
159 Sapsucker Woods Road
Ithaca, New York 14850



Founded 6 March 1937

Incorporated 8 August 1949

Carolina Bird Club is an incorporated association for the study and conservation of wildlife, particularly birds, chiefly in the Carolinas. Founded in 1937 as the North Carolina Bird Club, it was joined in 1948 by several South Carolina natural history clubs and the name changed to the Carolina Bird Club.

MEMBERSHIP

The Carolina Bird Club, Inc., is a non-profit educational and scientific organization. Dues, contributions and bequests to the club are deductible from State and Federal income and estate taxes. Membership is open to anyone interested in birds, natural history and conservation. The several classes of membership are listed below. Checks should be made payable to Carolina Bird Club, Inc., and sent to CBC Headquarters, Box 1220, Tryon, N.C. 28782.

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Contributing Membership	\$ 25.00
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(Payable in four consecutive annual installments.)	
Student Membership	\$ 1.00
Affiliated Club	\$ 2.00

THE CHAT

The Chat, as the official bulletin of Carolina Bird Club, Inc., is published quarterly in March, June, September and December. All members not in arrears for dues receive *The Chat*. Correspondence concerning memberships, changes of address and back numbers should be sent to CBC Headquarters, P.O. Box 1220, Tryon, N.C. 28782. Please notify Headquarters immediately of change of address.

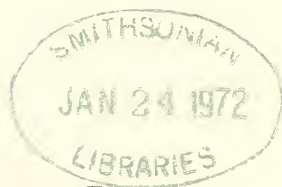
All papers, census reports and notices for publication in *The Chat* should be sent directly to the Editor. However, items intended for the General Field Notes or other departments should be sent to the department editors.

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The Chat

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Vol. 35 December 1971 No. 4

The Chat

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December 1971

No. 4

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OUR COVER — The Red-cockaded Woodpecker in the cover drawing by John Henry Dick is a resident of the central Sandhills section of North Carolina covered by Jay Carter's species list in this issue. Other drawings by Mr. Dick and Doug Pratt illustrate Jay's paper.

BIRDS OF THE CENTRAL SANDHILLS OF NORTH CAROLINA

J.H. CARTER III

This paper is based on records obtained from the following sources:

- (1) Pearson, Thomas G., C.H. Brimley, and H.H. Brimley. *Birds of North Carolina*. 1959 edition (BNC).
- (2) Skinner, Milton P., and John W. Achorn. *A Guide to the Winter Birds of the North Carolina Sandhills* (WBS). Albany: Science Press, 1928.
- (3) *The Chat*, Vol. 1-34 (1937-1970).
- (4) *Audubon Field Notes* (AFN), Vol. 22-24 (1968-1970).
- (5) Pennock, C.J. Bird Notes from Pinehurst, North Carolina, *Wilson Bulletin*, 23:34-42.
- (6) Milton P. Skinner Field Notes, in Charles Christopher Adams Papers, Southern Historical Collection, University of North Carolina, Chapel Hill, N.C.
- (7) The unpublished notes of Mary K. Wintyen (unpub., MKW) and of the author, J.H. Carter III (unpub., JHC).

The method of presentation, relative abundance terms, and residence status terms used in this paper follow closely those set forth by Dr. Robert J. Hader in his "Species List of Birds of Wake County, North Carolina," *The Chat*, 33:53-71. Common and scientific names are listed first, followed by relative abundance and residence status, and extreme dates of occurrence for transients and part-time residents. Status changes or habitat indications are given for some species.

Relative abundance terms are *common*, *fairly common*, *uncommon*, and *rare*. *Common* indicates that a species can usually be found in good numbers in the proper habitat at the proper season. A *fairly common* species can be found regularly, but in small numbers. An *uncommon* species cannot always be found, though several may be seen on occasion. *Rare* indicates a species that cannot be expected with any certainty, and for which only a few records exist.

Residence status terms are *permanent resident*, *summer resident*, *winter resident*, *visitor*, and *transient*. *Resident* species are present for the entire season indicated, while a *visitor* is present for only part of the season and may be irregular in occurrence. *Transients* refers to species found in migration only.

Abundance and residence status terms for each species are based on records for the period 1963 through mid-1971. Some species that have been recorded only once or twice have not been given an abundance or residence term.

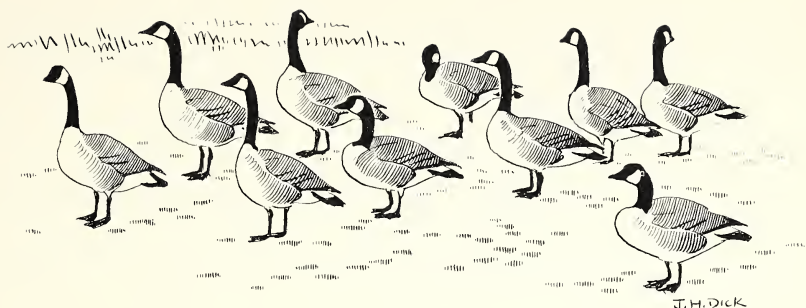
The area covered by this work consists of south-central and southeastern Moore County, northeastern Richmond County, extreme western Hoke County, and northern Scotland County. Gently rolling hills covered with sand make up the Sandhills Region. Elevation varies from about 250 feet to over 600 feet above sea level. The high ridges are characterized by such plant species as long-leaf pine (*Pinus palustris*), turkey oak (*Quercus laevis*), blackjack oak (*Quercus marilandica*), and wiregrass (*Aristida stricta*). Loblolly pine (*Pinus taeda*) sourwood (*Oxydendrum arboreum*), flowering dogwood (*Cornus florida*) and various oaks are found on the hillsides. Red maple (*Acer rubrum*), black gums (*Nyssa sylvatica*), water tupelo (*N. aquatica*), American holly (*Ilex opaca*), yellow poplar (*Liriodendron tulipifera*), sweet gum (*Liquidambar styraciflua*), and sweetbay (*Magnolia virginiana*) are typical of the swamps of the deeper valleys. An excellent account of Sandhills vegetation can be found in *The Natural Gardens of North Carolina* (Chapel Hill: UNC Press, 1967), by B.W. Wells.

The climate is generally mild. Summer temperatures usually range in the high 80s and 90s during the day, and in the upper 60s and low 70s at night. Winter daytime temperatures usually range in the 40s and 50s, while nightly lows range from the low 30s

to the low 40s, though temperatures below freezing are not uncommon. Yearly precipitation averages 40 to 50 inches, with usually one good snowfall each winter.

The author is grateful to R.J. Hader, J.F. Parnell, Mark Simpson, and Mary K. Wintyen for their help with this paper.

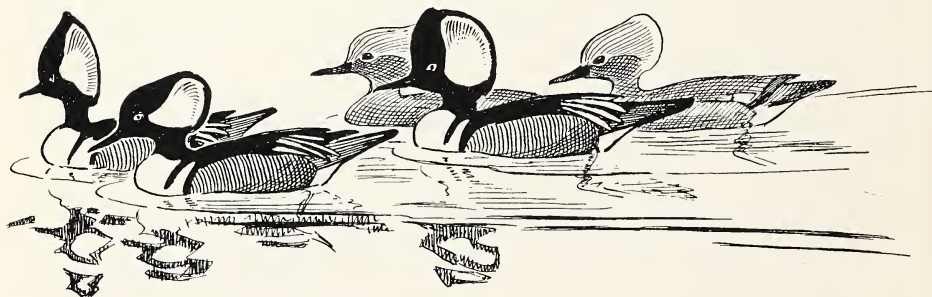
1. COMMON LOON (Gavia immer): Uncommon transient, 25 March to 28 April and 13 Nov. to 6 Dec. Single individuals are usually seen, but a flock of 11 was at Thagard's Lake on 13 April 1964 (unpub., JHC).
2. HORNED GREBE (Podiceps auritus): Uncommon winter visitor, 29 Oct. to 8 May. No more than four have been noted at one time.
3. PIED-BILLED GREBE (Podilymbus podiceps): Common winter and rare summer resident. Most are seen October through April. An adult with three half-grown young was seen on 9 July 1967 at Thagard's Lake (unpub., JHC).
4. DOUBLE-CRESTED CORMORANT (Phalacrocorax auritus): Rare spring visitor. A single individual was at Thagard's Lake on 27 and 28 April 1966 (Chat, 30:89-90), and one was there on 10 May 1968 (AFN, 22:514).
5. GREAT BLUE HERON (Ardea herodias): Uncommon summer visitor and winter resident.
6. GREEN HERON (Butorides virescens): Fairly common summer resident, 10 April to 18 Oct.
7. LITTLE BLUE HERON (Florida caerulea): Uncommon late summer visitor, 30 June to 3 Sept. Only spring record is one seen on 12 May 1968 (AFN, 22:514). Ten were at the McKinney Lake Fish Hatchery on 5 August 1971 (unpub., JHC).
8. CATTLE EGRET (Bubulcus ibis): Rare spring and fall visitor. Spring records are for one on 13 April 1970 (AFN, 24:589), and at least one on 3 and 10 May 1962 (unpub., MKW). Only other records are one on 2 Aug. 1969 (unpub., JHC), and one on 17, 18, and 24 Nov. 1968 (AFN, 23:33).
9. COMMON EGRET (Casmerodius albus): Uncommon late summer visitor, 11 June to 6 Oct. Thirteen were at Thagard's Lake on 9 July 1967 (unpub., JHC).
10. SNOWY EGRET (Leucophoyx thula): Rare late summer visitor. Only records are 14 July 1955 (unpub., MKW), one on 31 July 1969, and one on 24 Aug., 30 Aug., and 6 Sept. 1969 (unpub., JHC).
11. LOUISIANA HERON (Hydranassa tricolor): Only two records: one on 12 May 1968 (AFN, 22:515), and one on 12, 16, and 21 August 1970 (unpub., JHC).
12. BLACK-CROWNED NIGHT HERON (Nycticorax nycticorax): Only records are for two at Whispering Pines on 28 April 1971, and one there the next day (unpub., JHC).
13. LEAST BITTERN (Ixobrychus exilis): Rare summer resident. Only records are for June 1963 (unpub., JHC). The marsh where it was found at that time has since been destroyed.
14. AMERICAN BITTERN (Botaurus lentiginosus): Very uncommon spring transient, 12 Mar. to 2 May. Only one fall record, one on 17 Oct. 1970 (unpub., JHC). Probably occurs more regularly in fall than the one record indicates.
15. WOOD IBIS (mycteria americana): Only record is of two at Lakeview on 5 July 1955 (unpub., MKW).
16. WHISTLING SWAN (Olor columbianus): Rare winter visitor. Liles Morgan saw two on Lake Bagget in Richmond County on 21 Nov. 1969 (Chat, 34:27). Two were at

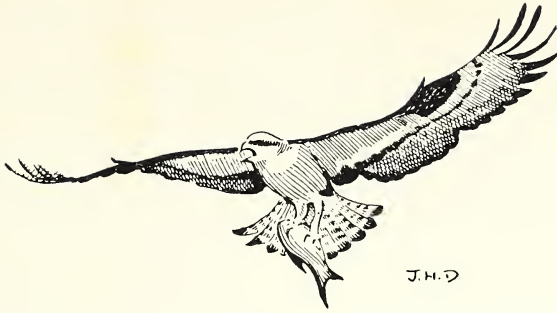


Spring Valley Lake on 25 and 27 Jan. 1970, and one was at Thagard's Lake on 7 Feb. 1970 (Chat, 34:51).

17. CANADA GOOSE (*Branta canadensis*): Rare winter visitor. Only records are five on 31 Oct. 1965 (Chat, 30: 89-90), and two on 22 Dec. 1963 (unpub., JHC).
18. BLUE GOOSE (*Chen caerulescens*): Only record is of an immature present from 30 Oct. 1966 through 8 April 1967 at Thurlow's Lake (unpub., JHC).
19. FULVOUS TREE DUCK (*Dendrocygna bicolor*): Two were seen on 15 April 1949 in the Barber Lakes area by Mr. and Mrs. C.L. Broley and Florence Robinson (Chat, 13:49).
20. MALLARD (*Anas platyrhynchos*): Fairly common winter resident, 22 Oct. to 2 May. A male, female, and eight small young were seen at Watson's Lake on 28 April 1965 (unpub., JHC).
21. BLACK DUCK (*Anas rubripes*): Fairly common winter resident, 18 Oct. to 6 April.
22. GADWALL (*Anas strepera*): Uncommon winter visitor, 17 Oct. to 1 May.
23. PINTAIL (*Anas acuta*): Uncommon winter visitor, 6 Oct. to 15 March.
24. GREEN-WINGED TEAL (*Anas carolinensis*): Uncommon winter visitor, 5 Sept. to 6 April.
25. BLUE-WINGED TEAL (*Anas discors*): Uncommon to fairly common transient, 22 March to 12 May and 12 Aug. to 12 Oct. Skinner stated that it was "found all winter in the Sandhills," but not commonly. He listed no supporting data in WBS or in his field notes, and there are no other winter records.
26. AMERICAN WIDGEON (*Mareca americana*): Uncommon winter visitor, 2 Oct. to 1 May. Seen most often during migrations.
27. SHOVELER (*Spatula clypeata*): Uncommon fall transient and rare winter visitor and spring transient, 9 Oct. to 27 April.
28. WOOD DUCK (*Aythya americana*): Permanent resident, fairly common in summer, less common in winter. Approximately 80 were flushed from a very small beaver pond at Weymouth Woods-Sandhills Nature Preserve on 25 Oct. 1969 (unpub., JHC).
29. REDHEAD (*Aythya americana*): Uncommon winter visitor, 29 Oct. to 15 April.
30. RING-NECKED DUCK (*Aythya collaris*): Common winter resident, 30 Sept. to 14 May. Two individuals seen at Thurlow's Lake on 28 Aug. 1968 (Chat, 33:27) remained at least until October. Their poor plumage and apparent inability or reluctance to fly indicate that they may have been summering cripples. A flock of approximately 500 was seen at Thagard's Lake on 30 October 1966 (unpub., JHC).

31. CANVASBACK (Aythya valisineria): Uncommon winter visitor, 29 Oct. to 26 Feb.
32. GREATER SCAUP (Aythya marila): Rare winter visitor. Three records: two on 29 Nov. 1968, two on 18 Jan. 1964, and one on 19, 25, and 26 Feb. 1967 (unpub., JHC).
33. LESSER SCAUP (Aythya affinis): Fairly common winter resident, 17 Oct. to 14 May.
34. COMMON GOLDENEYE (Bucephala clangula): Uncommon winter visitor, 13 Nov. to 7 Feb. Up to six were present at Lakeview during the 1970-1971 winter (unpub., JHC).
35. BUFFLEHEAD (Bucephala albeola): Uncommon to fairly common winter visitor, 18 Nov. to 28 April.
36. OLDSQUAW (Clangula hyemalis): Rare winter visitor, 21 Dec.-26 Feb. Three records: three were seen at Lakeview on 21 Dec. 1963 (unpub., MKW), one was there on 9 Jan. 1971, and one was there on 19, 25, and 26 Feb. 1967 (unpub., JHC).
37. WHITE-WINGED SCOTER (Melanitta deglandi): Only record is of one at Lakeview on 23 Oct. 1960 (unpub., MKW).
38. COMMON SCOTER (Oidemia nigra): Two records: one was at Spring Valley Lake on 29 Oct. 1966 (Chat, 31:50), and four were at Thagrad's Lake on 24 March 1969 (AFN, 23:580).
39. RUDDY DUCK (Oxyura jamaicensis): Uncommon winter visitor, 18 Oct. to 1 May.
40. HOODED MERGANSER (Lophodytes cucullatus): Fairly common winter resident, 30 Oct. to 10 April.
41. COMMON MERGANSER (Mergus merganser): Only positive record is one at Thagrad's Lake on 22 and 23 Dec. 1969 (Chat, 34:51).
42. RED-BREASTED MERGANSER (Mergus serrator): Uncommon transient and rare winter visitor, 25 Oct. to 28 April.
43. TURKEY VULTURE (Cathartes aura): Uncommon permanent resident. Pennock termed it abundant and Skinner said it was common, but it has decreased considerably during the last 40 years.





44. BLACK VULTURE (Coragyps atratus): Uncommon permanent resident. Skinner (WBS) stated that this species was more common than the Turkey Vulture; but like the preceding species, it has decreased in numbers and is now the less abundant of the two.
45. MISSISSIPPI KITE (Ictinia mississippiensis): Only record is of one seen over a golf course at Southern Pines on 20 Oct. 1949 (Chat, 13:75).
46. SHARP-SHINNED HAWK (Accipiter striatus): Uncommon winter resident, 16 Oct. to 28 April.
47. COOPER'S HAWK (Accipiter cooperii): Uncommon winter resident, 27 Aug. to 28 April.
48. RED-TAILED HAWK (Buteo jamaicensis): Fairly common permanent resident.
49. RED-SHOULDERED HAWK (Buteo lineatus): Uncommon permanent resident. Skinner (WBS) found it to be the commonest large hawk, but this is definitely not the case now. It is now restricted to large tracts of swamp forest.
50. BROAD-WINGED HAWK (Buteo platypterus): Uncommon transient and rare summer resident, 27 March to 6 Sept.
51. MARSH HAWK (Circus cyaneus): Uncommon winter visitor, 4 Oct. to 4 April. Most often seen in late fall.
52. OSPREY (Pandion haliaetus): Fairly common spring and uncommon fall transient, 11 March to 8 May and 5 Aug. to 16 Oct. Eight individuals were seen migrating northward on the morning of 8 April 1964 (unpub., JHC).
53. SPARROW HAWK (Falco sparverius): Fairly common winter resident, rare in summer. Most are seen from August through April. Two June records, and one for July.
54. BOBWHITE (Colinus virginianus): Fairly common permanent resident.
55. TURKEY (Meleagris gallopavo): Uncommon permanent resident. Restricted to large tracts of woodland in the Sandhills Wildlife Management Area and Fort Bragg Military Reservation.
56. KING RAIL (Rallus elegans): Exact status uncertain. Probably mainly transient, but may rarely occur in summer and winter. Skinner (WBS) thought it to be rare in winter, but more common in summer. He provides the only record, one seen near Aberdeen on 4 March 1926.

57. SORA (Porzana carolina): Uncommon spring transient, 19 Mar. to 29 April. Probably uncommon in fall also, but only one record to date. One was seen at Thagard's Lake on 25 Oct. 1966 (unpub., JHC).
58. PURPLE GALLINULE (Porphyrula martinica): Only record is of a nesting pair at River Bend Ranch in late June 1963 (Chat, 27:54-55). The adults were first seen on 22 June, and a nest with two eggs was discovered on 28 June.
59. COMMON GALLINULE (Gallinula chloropus): Rare transient. Single individuals were seen on 28 April 1967 and 27 Aug. 1963. One was found dead near Southern Pines in September 1970 (unpub., JHC). One spent the 1961-1962 winter at Thurlow's Lake (Chat, 27:20-21).
60. AMERICAN COOT (Fulica americana): Fairly common winter resident, rare in early and late summer, 11 Aug. to 18 June. Most are seen October through April. At Thagard's Lake 145 were seen on 20 Nov. 1965 (Chat, 30:89-90).
61. SEMIPALMATED PLOVER (Charadrius semipalmatus): Very uncommon fall transient, 30 July to 1 Oct. Only spring record is 25 May 1958 (unpub., MKW).
62. KILLDEER (Charadrius vociferus): Uncommon summer resident and fairly common winter resident, often becoming fairly common by late summer.
63. AMERICAN GOLDEN PLOVER (Pluvialis dominica): Only records are for 23 to 31 March 1968, when up to 16 were at Little River Farm and up to 3 were at Thagard's Lake (Chat, 32:102).
64. AMERICAN WOODCOCK (Philohela minor): Uncommon permanent resident.
65. COMMON SNIFE (Capella gallinago): Uncommon winter resident, 4 Sept. to 2 May. Often becomes fairly common in early spring.
66. UPLAND PLOVER (Bartramia longicauda): Rare transient. Spring records are for two on 24 March and one on 26 April 1969 (Chat, 33:106). Fall records are for two on 30 July, three on 6 Aug., and one on 12 Aug. 1971 (unpub., JHC).
67. SPOTTED SANDPIPER (Actitis macularia): Fairly common transient, also rare summer and winter resident. A flightless young bird was found at Thagard's Lake on 3 June 1967, and a nest with four eggs was discovered on 26 May 1968 at the same place (Chat, 32:77). Winter records are one on 22 Dec. 1969, two on 24 Dec. 1969, and one on 30 Jan. 1970 (Chat, 34:16,50).
68. SOLITARY SANDPIPER (Tringa solitaria): Fairly common transient, 26 April to 18 May and 16 July to 7 Oct.
69. GREATER YELLOWLEGS (Totanus melanoleucus): Uncommon transient, 24 March to 24 May and 30 July to 1 Nov. Nineteen were at Thagard's Lake on 6 and 7 April 1968 (Chat, 32:102). A single Yellowlegs was seen at Spring Valley Lake on 11 January 1964, but the species was not determined (unpub., JHC).
70. LESSER YELLOWLEGS (Totanus falvipes): Uncommon transient, 23 March to 29 April and 30 July to 7 Oct. A flock of 12 was at Thagard's Lake on 30 and 31 March 1968 (Chat, 32:102).
71. PECTORAL SANDPIPER (Erolia melanotos): Uncommon fall transient, 30 July to 6 Oct. Also rare spring transient. All spring records 23 March to 12 April 1968, when up to 25 were at Little River Farm and up to 50 were at Thagard's Lake (Chat, 32:102).
72. LEAST SANDPIPER (Erolia minutilla): Fairly common fall transient, 30 July to 4 Oct. Also rare spring transient, 6 April to 9 May.
73. STILT SANDPIPER (Micropalama himantopus): Only record is of one at Thurlow's Lake 9 Oct. 1961 (unpub., MKW).

74. SEMIPALMATED SANDPIPER (Ereunetes pusillus): Rare spring and very uncommon fall transient, 2 May to 3 June and 30 July to 3 Sept.
75. RING-BILLED GULL (Larus delawarensis): Rare fall transient and uncommon winter visitor and spring transient, 22 Oct. to 5 May. Most often seen in March and April.
76. BONAPARTE'S GULL (Larus philadelphia): Rare transient and winter visitor. Three records: one on 29 Oct. 1966, one on 24 Dec. 1969 (unpub., JHC), and two on 28 April 1966 (Chat, 30:89-90).
77. FORSTER'S TERN (Sterna forsteri): Only record is of one at Thagard's Lake on 10 Sept. 1967 (AFN, 22:23).
78. COMMON TERN (Sterna hirundo): Two records: nine at Thagard's Lake on 28 April 1966 (Chat, 30:89-90), and two at Lakeview on 26 Aug. 1964 (unpub., JHC).
79. LEAST TERN (Sterna albigrons): Only record is of one at Thagard's Lake on 24 May 1968 (unpub., JHC).
80. BLACK TERN (Chlidonias niger): Rare transient. Spring records are for one on 28 April 1966 (Chat, 30:89-90), one on 8 May 1971 (unpub., JHC), and two on 10 May 1966 (Chat, 30:89-90). Only fall records are for six on 20 Aug. 1967 (Chat, 32:31) and four on 26 Aug. 1964 (unpub., JHC).
81. ROCK DOVE (Columbia livia): Uncommon permanent resident.
82. MOURNING DOVE (Zenaidura macroura): Common permanent resident.
83. YELLOW-BILLED CUCKOO (Coccyzus americanus): Fairly common summer resident, 2 May to 26 Oct. A nest with two small young was found on 1 Sept. 1963 (unpub., JHC).
84. BLACK-BILLED CUCKOO (Coccyzus erythrophthalmus): Rare transient. Three records: single individuals on 14 May 1964, 7 Sept. 1964, and 16 Sept. 1968 (unpub., JHC).
85. SCREECH OWL (Otus asio). Uncommon permanent resident.
86. GREAT HORNED OWL (Bubo virginianus): Uncommon permanent resident.
87. BARRED OWL (Strix varia): Uncommon permanent resident.
88. SHORT-EARED OWL (Asio flammeus): Only record is of one on 16 Dec. 1926 (Skinner).
89. CHUCK-WILL'S-WIDOW (Caprimulgus carolinensis): Common summer resident, 18 April to 2 Aug. (probably into September).
90. WHIP-POOR-WILL (Caprimulgus vociferus): Fairly common summer resident, 3 April to 17 Aug. (probably remains into September and October).
91. COMMON NIGHTHAWK (Chordeiles minor): Fairly common summer resident, 19 April to 4 Oct. Small flocks in migration are not unusual in late August and early September. Pennock saw one at close range and in good light on 22 Feb. 1910 and heard one on 14 March of the same year.
92. CHIMNEY SWIFT (Chaetura pelagica): Common summer resident, 26 March to 22 Oct.
93. RUBY-THROATED HUMMINGBIRD (Archilochus colubris): Fairly common summer resident, 3 April to 21 Sept.
94. BELTED KINGFISHER (Megasceryle alcyon): Fairly common permanent resident.
95. YELLOW-SHAFTED FLICKER (Colaptes auratus): Common permanent resident.

96. PILEATED WOODPECKER (Dryocopus pileatus): Fairly common permanent resident in large tracts of swamp forest. Uncommon in smaller swamps.
97. RED-BELLIED WOODPECKER (Centurus carolinus): Common permanent resident. Has evidently increased in abundance, because Pennock saw only one and Skinner (WBS) termed it as "occasional."
98. RED-HEADED WOODPECKER (Melanerpes erythrocephalus): Permanent resident, common in summer and uncommon in winter.
99. YELLOW-BELLIED SAPSUCKER (Sphyrapicus varius): Fairly common winter resident, 16 Sept. to 30 April.
100. HAIRY WOODPECKER (Dendrocopos villosus): Fairly common permanent resident.
101. DOWNY WOODPECKER (Dendrocopos pubescens): Common permanent resident.
102. RED-CKADED WOODPECKER (Dendrocopos borealis): Fairly common permanent resident.
103. EASTERN KINGBIRD (Tyrannus tyrannus): Common summer resident, 12 April to 15 Sept.
104. SCISSOR-TAILED FLYCATCHER (Musivora forficata): Only record is of one at Southern Pines on 6 April 1953 (Chat, 17:73).
105. GREAT CRESTED FLYCATCHER (Myiarchus crinitus): Fairly common summer resident, 16 April to 18 Sept.
106. EASTERN PHOEBE (Sayornis phoebe): Uncommon permanent resident. Appears to be a fairly common nesting species, but is unexplainably scarce following the nesting season (July through September).
107. ACADIAN FLYCATCHER (Empidonax virescens): Common summer resident, 23 April to 4 Sept.
108. EASTERN WOOD PEWEE (Contopus vierens): Fairly common summer resident, 22 April to 16 Oct.
109. OLIVE-SIDED FLYCATCHER (Nuttallornis borealis): Only record is one near Southern Pines on 16 Sept. 1968 (Chat, 33:51).
110. HORNED LARK (Eremophila alpestris): Fairly common permanent resident, but found only at the Southern Pines-Pinehurst Airport, except possibly elsewhere in winter. Two nests were found in the spring of 1961, one on 20 March and the other in May (unpub., MKW). Seen only in small numbers now, but Skinner mentions seeing over 30 several times during December 1926 and January 1927, with 400 on 27 Jan. 1926.
111. TREE SWALLOW (Iridoprocne bicolor): Fairly common spring transient, 7 March to 31 May. Also rare fall transient, the only records being five on 18 Oct. 1970 and three on 4 Nov. 1966 (unpub., JHC). Probably more common in fall than the two records indicate. Occasionally seen in large numbers in spring.
112. BANK SWALLOW (Riparia riparia): Uncommon transient, 27 March to 28 May and 17 July to 20 Sept. Seen most often in spring.
113. ROUGH-WINGED SWALLOW (Stelgidopteryx ruficollis): Fairly common summer resident, 9 March to 6 July (possibly a little later).
114. BARN SWALLOW (Hirundo rustica): Common transient and fairly common summer resident, 19 March to 21 Sept. First found breeding in the area 15 June 1959 (Chat, 23:55). Two small colonies are known to nest in the area now.
115. CLIFF SWALLOW (Petrochelidon pyrrhonota): Rare transient. Only records are

two on 28 April 1967, with about a dozen the next day, and one on 12 Aug. 1970 (unpub., JHC).

116. PURPLE MARTIN (Progne subis): Fairly common summer resident, 6 March to 23 Aug.
117. BLUE JAY (Cyanocitta cristata): Common permanent resident.
118. COMMON CROW (Corvus brachyrhynchos): Exact status clouded by the recent discovery of Corvus ossifragus in the area. At this time it appears safe to term C. brachyrhynchos as a fairly common permanent resident.
119. FISH CROW (Corvus ossifragus): Exact status uncertain. First definite record is of two collected on 15 May 1970 (unpub., JHC), but it is not thought to be a newcomer to the area. Appears to be a common summer resident from March to October. No breeding records.
120. CAROLINA CHICKADEE (Parus carolinensis): Common permanent resident.
121. TUFTED TITMOUSE (Parus bicolor): Common permanent resident.
122. WHITE-BREASTED NUTHATCH (Sitta carolinensis): Fairly common permanent resident.
123. RED-BREASTED NUTHATCH (Sitta canadensis): Fairly common to common winter resident some years but absent other years, 1 Oct. to 15 May. Recent years of occurrence have corresponded with "winter finch" invasions.
124. BROWN-HEADED NUTHATCH (Sitta pusilla): Common permanent resident.
125. BROWN CREEPER (Certhia familiaris): Fairly common winter resident, 6 Oct. to 15 April.
126. HOUSE WREN (Troglodytes aedon): Uncommon spring transient, 15 April to 4 May. Also rare fall transient, the only records being a single individual on 11 and 18 Oct. 1969 (unpub., JHC). Probably occurs more regularly in fall than the two records indicate. A single winter record is for one seen on and immediately prior to 22 Dec. 1970 (Lura Williams, pers. com.).
127. WINTER WREN (Troglodytes troglodytes): Fairly common winter resident, 9 Oct. to 29 April.
128. BEWICK'S WREN (Thryomanes bewickii): Only records are one seen by Pennock on 16 March 1910 and one on 20 Nov. 1965 (unpub., JHC). Skinner (WBS) termed it an "occasional visitor to the Sandhills in winter," but he gave no records for it.
129. CAROLINA WREN (Thryothorus ludovicianus): Common permanent resident.
130. LONG-BILLED MARSH WREN (Telmatodytes palustris): Rare spring transient. Two records: single individuals on 28 April 1970 (AFN, 24:590), and on 29 April 1971 (unpub., JHC). Probably occurs rarely in fall also.
131. SHORT-BILLED MARSH WREN (Cistothorus platensis): Rare transient. Two records: single individuals on 29 April 1971 (unpub., JHC), and on 23 Aug. 1969 (Chat, 34:28).
132. MOCKINGBIRD (Mimus polyglottos): Common permanent resident.
133. CATBIRD (Dumetella carolinensis): Fairly common summer resident and rare winter resident. Most common during migration.
134. BROWN THRASHER (Toxostoma rufum): Common summer resident and fairly common winter resident.
135. ROBIN (Turdus migratorius): Common permanent resident.



136. WOOD THRUSH (*Hylocichla mustelina*): Common summer resident, 10 April to 20 Oct.
137. HERMIT THRUSH (*Hylocichla guttata*): Fairly common winter resident, 12 Oct. to 8 May.
138. SWAINSON'S THRUSH (*Hylocichla ustulata*): Uncommon spring and fairly common fall transient, 25 April to 20 May and 3 Sept. to 18 Oct.
139. GRAY-CHEEKED THRUSH (*Hylocichla minima*): Uncommon fall transient, 21 Sept. to 17 Oct. Also rare spring transient, the only records being single individuals on 13 and 17 May 1969 (unpub., JHC).
140. VEERY (*Hylocichla fuscescens*): Uncommon transient, 27 April to 15 May and 25 Aug. to 26 Sept. Sometimes fairly common in fall.
141. EASTERN BLUEBIRD (*Sialia sialis*): Fairly common permanent resident. On 15 Jan. 1927, Skinner saw 68 around a water barrel on a Southern Pines golf course.
142. BLUE-GRAY GNATCATCHER (*Poliophtila caerulea*): Common summer resident, 24 March to 17 Oct.
143. GOLDEN-CROWNED KINGLET (*Regulus satrapa*): Common winter resident, 9 Oct. to 9 April.
144. RUBY-CROWNED KINGLET (*Regulus calendula*): Common winter resident, 17 Sept. to 3 May.
145. WATER PIPIT (*Anthus spinoletta*): Uncommon winter visitor, 9 Oct. to 1 May. Seen most often in late winter and early spring. Usually found in small numbers today, but Skinner saw five flocks of from 50 to 160 in January and February 1927.
146. CEDAR WAXWING (*Bombycilla cedrorum*): Fairly common winter resident, 31 Aug. to 19 May.
147. LOGGERHEAD SHRIKE (*Lanius ludovicianus*): Fairly common permanent resident.
148. STARLING (*Sturnus vulgaris*): Common permanent resident. Pennock does not mention it, and Skinner (WBS) termed it "Occasional...and increasing in number."

149. WHITE-EYED VIREO (Vireo griseus): Common summer resident in large tracts of swamp forest, 22 March to 4 Oct. Less common in smaller swamps.
150. YELLOW-THROATED VIREO (Vireo flavifrons): Fairly common summer resident, 4 April to 9 Oct.
151. SOLITARY VIREO (Vireo solitarius): Uncommon transient and fairly common, but very localized, summer resident, 15 March to 21 Nov. Thus far, found nesting only in longleaf pine-scrub oak forest at Weymouth Woods-Sandhills Nature Preserve. First nest was found on 9 June 1969 (Chat, 33:107). Five pairs were present during the summer of 1970, and six nests were found (AFN, 24:672).
152. RED-EYED VIREO (Vireo olivaceus): Common summer resident, 14 April to 10 Oct.
153. PHILADELPHIA VIREO (Vireo philadelphicus): Rare transient. Three records: single individuals were recorded on 5 May 1946 (Chat, 10:58), 17 Sept. 1966 (Chat, 31:50), and 25 Sept. 1967 (Chat, 32:31).
154. WARBLING VIREO (Vireo gilvus): Only record is one seen along Drowning Creek on 4 May 1969 (Chat, 33:107).
155. BLACK-AND-WHITE WARBLER (Mniotilta varia): Fairly common transient and uncommon summer resident, 26 March to 17 Oct.
156. PROTHONOTARY WARBLER (Protonotaria citrea): Common summer resident in large tracts of swamp forest, 6 April to 4 Sept. Less common in smaller swamps.
157. SWAINSON'S WARBLER (Limnothlypis swainsonii): Uncommon summer resident, 23 April to 21 July (probably to September). Found only in large swamps along Little River and Drowning Creek; appears to have a spotty distribution in these areas. First found breeding in area in 1968 (Chat, 32:103-104).
158. WORM-EATING WARBLER (Helmitheros vermivorus): Uncommon transient, 16 April to 7 May and 15 Aug. to 1 Sept. Most are seen in spring.
159. GOLDEN-WINGED WARBLER (Vermivora chrysoptera): Rare transient. Spring records are 24 April 1964 (unpub., JHC) and 3 May 1949 (Chat, 13:48). Only fall records are 20 and 24 Aug. 1970 (unpub., JHC).
160. BLUE-WINGED WARBLER (Vermivora pinus): Uncommon transient, 26 April to 3 May and 16 Aug. to 1 Sept. Most are seen in spring.
161. BREWSTER'S WARBLER (V. chrysoptera x V. pinus): Only record is of one along Drowning Creek on 29 Aug. 1968 (Chat, 33:27).
162. TENNESSEE WARBLER (Vermivora peregrina): Uncommon fall transient, 27 Aug. to 29 Oct.
163. ORANGE-CROWNED WARBLER (Vermivora celata): Only record is of one on 20 Oct. 1968 (Chat, 33:29).
164. PARULA WARBLER (Parula americana): Fairly common summer resident, 31 March to 17 Oct. Most common during migration.
165. YELLOW WARBLER (Dendroica petechia): Uncommon spring transient, and very uncommon fall transient, 25 April to 18 May and 31 July to 5 Oct.
166. MAGNOLIA WARBLER (Dendroica magnolia): Uncommon spring and fairly common fall transient, 25 April to 26 May and 24 Aug. to 17 Oct.
167. CAPE MAY WARBLER (Dendroica tigrina): Very uncommon spring transient, 29 April to 8 May. Only one fall record: one on 4 Oct. 1964 (unpub., JHC). Probably more common in fall than the one record indicates.

168. BLACK-THROATED BLUE WARBLER (Dendroica caerulescens): Fairly common transient, 18 April to 24 May and 4 Sept. to 29 Oct.
169. MYRTLE WARBLER (Dendroica coronata): Fairly common to common winter resident, 6 Oct. to 9 May. Most common in spring.
170. BLACK-THROATED GREEN WARBLER (Dendroica virens): Uncommon transient, 28 April to 6 May and 16 Sept. to 6 Nov. Most are seen in fall.
171. BLACKBURNIAN WARBLER (Dendroica fusca): Fairly common fall transient, 24 Aug. to 13 Oct. Only spring record is of one on 23 April 1969 (Chat, 33:107).
172. YELLOW-THROATED WARBLER (Dendroica dominica): Fairly common summer resident, 12 March to 23 Sept.
173. CHESTNUT-SIDED WARBLER (Dendroica pensylvanica): Rare spring and fairly common fall transient, 28 April to 13 May and 20 Aug. to 20 Oct.
174. BAY-BREASTED WARBLER (Dendroica castanea): Uncommon fall transient, 16 Sept. to 13 Oct.
175. BLACKPOLL WARBLER (Dendroica striata): Uncommon spring transient, 30 April to 28 May. Only fall record is 20 Oct. 1968 (unpub., JHC), but probably occurs somewhat more regularly at that season than the one record seems to indicate. Fairly common at times in spring.
176. PINE WARBLER (Dendroica pinus): Common permanent resident.
177. PRAIRIE WARBLER (Dendroica discolor): Common summer resident, 4 April to 5 Oct.
178. PALM WARBLER (Dendroica palmarum): Uncommon transient and winter resident, 3 Oct. to 27 April. Usually scarce and difficult to find.
179. OVENBIRD (Seiurus aurocapillus): Fairly common transient, and locally fairly common summer resident, 9 April to 11 Oct.
180. NORTHERN WATERTHRUSH (Seiurus noveboracensis): Fairly common transient, 13 April to 24 May and 11 Aug. to 25 Sept.
181. LOUISIANA WATERTHRUSH (Seiurus motacilla): Fairly common summer resident, 23 March to 30 Aug.
182. KENTUCKY WARBLER (Oporornis formosus): Fairly common summer resident, 22 April to 4 Sept.
183. YELLOWTHROAT (Geothlypis trichas): Common transient, fairly common summer resident, and rare winter resident. Rare from November to mid-March.
184. YELLOW-BREASTED CHAT (Icteria virens): Fairly common summer resident, 27 April to 6 Nov. Apparently very scarce in fall.
185. HOODED WARBLER (Wilsonia citrina): Common summer resident, 28 March to 1 Oct.
186. WILSON'S WARBLER (Wilsonia pusilla): Only record is of one along Drowning Creek on 10 May 1969 (AFN, 23:580).
187. CANADA WARBLER (Wilsonia canadensis): Uncommon transient, 20 April to 26 May and 22 Aug. to 24 Sept.
188. AMERICAN REDSTART (Setophaga ruticilla): Common transient and fairly common summer resident, 7 April to 17 Oct.
189. HOUSE SPARROW (Passer domesticus): Common permanent resident.
190. BOBOLINK (Dolichonyx oryzivorus): Uncommon transient, 28 April to 1 May and 18 Aug. to 3 Oct. Probably occurs through most of May.

191. EASTERN MEADOWLARK (*Sturnella magna*): Common permanent resident.
192. RED-WINGED BLACKBIRD (*Agelaius phoeniceus*): Fairly common permanent resident.
193. ORCHARD ORIOLE (*Icterus spurius*): Fairly common summer resident, 19 April to 4 Sept.
194. BALTIMORE ORIOLE (*Icterus galbula*): Uncommon transient and uncommon to fairly common winter resident, 22 Aug. to 13 May. First recorded in winter 31 Jan. 1954 (unpub., MKW). Wintering individuals begin to arrive in November and depart in mid-April, and are restricted to certain yards in the area.
195. RUSTY BLACKBIRD (*Euphagus carolinus*): Uncommon transient and winter visitor, 6 Oct. to 28 April. Most are seen during migration. Skinner occasionally saw sizable flocks in winter, but it is very scarce in winter now.
196. BREWER'S BLACKBIRD (*Euphagus cyanocephalus*): Only record is 21 Feb. 1959 (unpub., MKW).
197. COMMON GRACKLE (*Quiscalus quiscula*): Permanent resident, fairly common in summer and rare in winter (December and January). Most common in migration, especially in fall, when large flocks are commonly seen.
198. BROWN-HEADED COWBIRD (*Molothrus ater*): Permanent resident, uncommon in summer and rare in mid-winter (December and January). Fairly common in migration. Skinner (WBS) termed it "occasional throughout the winter." Eggs of this species have been found in the nests of the Solitary Vireo (unpub., JHC), Swainson's Warbler (Chat, 32:103-104), and Kentucky Warbler (unpub., JHC). Young have been seen being fed by a Yellow-throated Warbler (unpub., JHC) and an American Redstart (Chat, 32:81).
199. SCARLET TANAGER (*Piranga olivacea*): Uncommon transient, 25 April to 12 May and 11 Sept. to 18 Oct.
200. SUMMER TANAGER (*Piranga rubra*): Common summer resident, 14 April to 3 Oct.
201. CARDINAL (*Richmondia cardinalis*): Common permanent resident.
202. ROSE-BREASTED GROSBEAK (*Pheucticus ludovicianus*): Uncommon transient, 29 April to 9 May and 21 Sept. to 17 Oct.
203. BLUE GROSBEAK (*Guiraca caerulea*): Fairly common summer resident, 19 April to 4 Oct. A single individual was seen on 22 Dec. 1970 near Southern Pines (unpub., JHC et al.).
204. PAINTED BUNTING (*Passerina ciris*): One appeared at a feeder in Southern Pines on 24 Dec. 1970 and remained through 12 April 1971 (unpub., MKW and JHC).
205. INDIGO BUNTING (*Passerina cyanea*): Fairly common summer resident, 19 April to 18 Oct.
206. DICKCISSEL (*Spiza americana*): Rare spring transient. Three records: March 1958 (Vera Chase, pers. com.), March 1959 (Ethel Wotton, pers. com.), and one present 4 March to 9 April 1970 (Chat, 34:84 and AFN, 24:590).
207. EVENING GROSBEAK (*Hesperiphona vespertina*): Common winter resident some years, absent others, 1 Nov. to 23 May. First recorded winter of 1957-1958 (Chat, 22:53).
208. PURPLE FINCH (*Carpodacus purpureus*): Fairly common to common winter resident, 25 Oct. to 27 April. An individual with slightly impaired flight was seen 1 June 1966 (unpub., JHC). Most common during Evening Grosbeak invasion years.

209. PINE SISKIN (Spinus pinus): Uncommon to common winter resident some years, absent others, 25 Oct. to 13 May. Occurs mostly during the years of Evening Grosbeak invasions.
210. AMERICAN GOLDFINCH (Spinus tristis): Fairly common to common winter and uncommon summer resident.
211. RED CROSSBILL (Loxia curvirostra): Only records are for the 1969-1970 winter, when it was fairly common. First appeared 15 Nov. and last recorded 2 June (AFN, 24:34, 590).
212. RUFOUS-SIDED TOWHEE (Pipilo erythrophthalmus): Common permanent resident.
213. SAVANNAH SPARROW (Passerculus sandwichensis): Common winter resident, 17 Sept. to 9 May. Most common during spring migration.
214. GRASSHOPPER SPARROW (Ammodramus savannarum): Only record is of one on 1 March 1926 (WBS).
215. HENSLOW'S SPARROW (Passerherbulus henslowii): Only records are provided by Skinner. He saw single individuals on 27 Jan. 1926 and 28 Feb. 1927.
216. VESPER SPARROW (Pooecetes gramineus): Uncommon winter resident, 10 Nov. to 5 April. Quite scarce in mid-winter. Most common during early spring.
217. LARK SPARROW (Chondestes grammacus): Only record is of one seen near Pinebluff on 15 May 1968 (AFN, 22:516).
218. BACHMAN'S SPARROW (Aimophila aestivalis): Exact status uncertain. Suspected of being an uncommon and local permanent resident in the extensive pine forests of the area. Skinner thought it to be a permanent resident, most common in summer (WBS). His only record was one on 26 Feb. 1926. There are four recent records at McKinney Lake Fish Hatchery in July and August 1970-1971 (unpub., JHC). Up to five individuals, including young, have been recorded there.
219. SLATE-COLORED JUNCO (Junco hyemalis): Common winter resident, 8 Oct. to 21 April.
220. CHIPPING SPARROW (Spizella passerina): Common summer and fairly common winter resident.
221. FIELD SPARROW (Spizella pusilla): Common permanent resident.
222. WHITE-CROWNED SPARROW (Zonotrichia leucophrys): Only records are for two on 20 Oct. 1963 (unpub., JHC) and one on 29 Nov. 1961 (unpub., MKW).
223. WHITE-THROATED SPARROW (Zonotrichia albicollis): Common winter resident, 4 Oct. to 15 May.
224. FOX SPARROW (Passerella iliaca): Fairly common winter resident, 3 Nov. to 7 April.
225. SWAMP SPARROW (Melospiza georgiana): Common winter resident, 4 Oct. to 12 May.
226. SONG SPARROW (Melospiza melodia): Common winter resident, 12 Oct. to 29 April.
227. SNOW BUNTING (Plectrophenax nivalis): Rare winter visitor. Only records are a flock of 20 at Southern Pines on 6 Feb. 1939 (Chat), over 20 on 3 Feb. 1940, and one on 27 Feb. 1944 (Chat, 8:32).

ADDENDA

The following species were added to the above list while the type was being set.

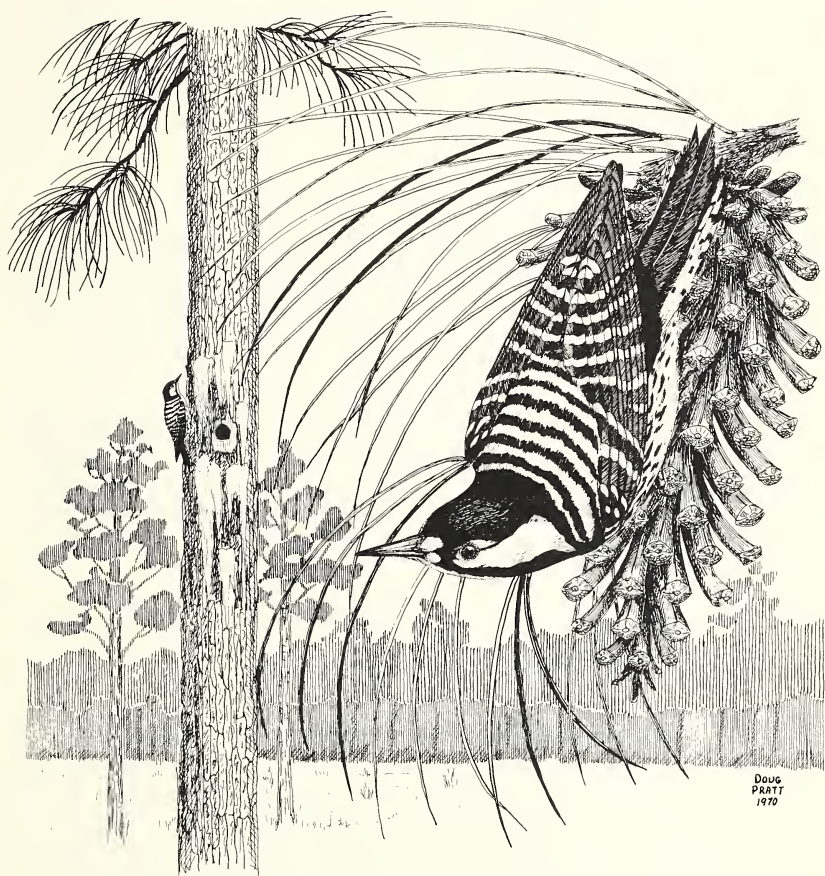
228. CLAPPER RAIL (Rallus longirostris): A large grayish rail, apparently referable

to this species, was flushed twice from a pasture near Whispering Pines on 9 Oct. 1971 (unpub., JHC).

229. LAUGHING GULL (*Larus atricilla*): Eight were seen at Thagard's Lake on 31 Oct. 1971 (unpub., JHC).

230. SHARP-TAILED SPARROW (*Ammospiza caudacuta*): One was flushed several times from a wet pasture near Whispering Pines on 9 Oct. 1971 (unpub., JHC).

P. O. Box 891, Southern Pines, N.C. 28387, 16 August 1971.





Conservation

. . . with Marie Mellinger

December Darkness

Days grow short in December, and darkness comes early. Reading the daily papers, one feels that days for wilderness and wildlife are growing shorter, and that a sort of early December darkness is spreading over the world. Here and there are a few glimmers of light as dedicated conservationists fight the battle of the environment, and we are all going to have to work to our outmost to spread the light.

Power

Seven sites are being considered for electric generating plants in North and South Carolina. Two more on Lake Keowee, one on Lake Watteree, one near Lake Wylie, all in South Carolina, and two on Lake Norman in North Carolina. Largest and probably first to be built will be Trotter Shoals on the Savannah River. Biologists of the South Carolina Wildlife Resources Department say this \$121 million dam project should be abandoned. Located between Hartwell Reservoir and Clark Hill Reservoir, the proposed project will usurp over 26,000 acres of prime deer, turkey, and wild game habitat, not to mention \$60,000 in hunting revenue lost.

Add to these the proposed nuclear power plant on the Savannah River in Burke County, Georgia, and the proposed plant at Barnwell, S.C., and there will be little of the Savannah River left in an untouched state.

Pawley's Island is to have a \$2 million condominium. The builders have been granted state approval for an advanced sewage disposal treatment process which calls for dumping bacteria free wastes into the ocean.

The Greenville, S.C., man who killed a rare "migratory swamp heron" (newspaper description of species) was given a suspended sentence. The Magistrate who suspended the imposed \$25.00 fine said the man "only knew that some sort of large bird was flying around at night and he shot it." In as much as South Carolina law now protects owls and other night flying birds as well as rare herons we fail to see why ignorance was any excuse for breaking the law.

The controversial billboard bill is before the South Carolina Senate. Removal of billboards would do much to beautify South Carolina's highways. Now is the time for individuals and organizations to make themselves heard. The Garden Clubs of North Carolina defined that state's billboard law, "which generally prohibits advertising within 600 feet of a primary highway." Both states must come to some agreement with the federal government or face loss of federal highway money.

Harold Martin of the *Atlanta Constitution* has coined an appropriate name for the so called sportsmen's big game preserves, calling the one to be built in Harris County, Georgia, Mr. AMOS' ABBATOIR. Mr. Martin states, "Sportsmen won't have to go to the ends of the earth to sneak up on the animals in their native habitat. They can go down to Harris County and find the animals there already penned up behind a 12 foot fence in a 600 acre corral." In the same vein, letters poured in to the *Constitution* after a feature article on a certain South Carolinian's NATURE (???) MUSEUM of stuffed and mounted rare big game trophies. Could the average citizen be getting more civilized?

We applaud Pan-Am Airways for refusing to fly hunting safaris to Africa. A major consideration in the dwindling populations of some 500 animal species has been the safari slaughter. We also applaud the Piedmont National Wildlife Refuge for initiating a very popular photo-safari.

Recycling

Recycling is another way of saying "waste not, want not." If our waste materials can be channeled for re-use, recycling not only helps solve the waste disposal problem but conserves our dwindling natural resources as well. Glass, aluminum, and paper, can all be recycled. Needed are collection places and companies willing to accept materials for recycling. Organizations and individuals can be most helpful in establishing collection depots for materials to be recycled.

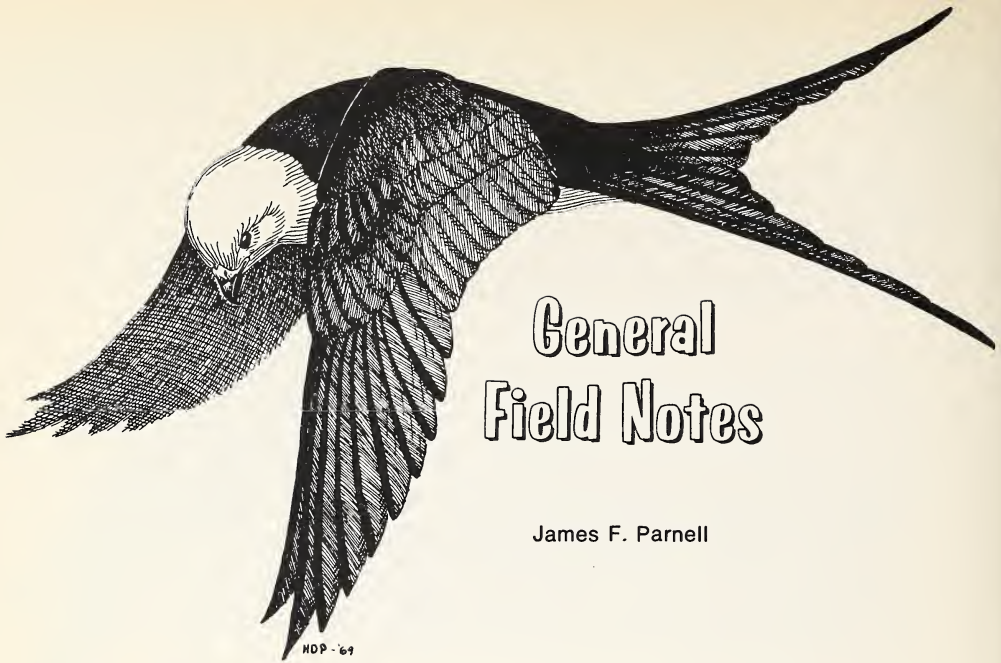
An article by Dorothy Marks in the *Atlanta Constitution* states that "50% of the trash in the world is paper or paper products." Mrs. Richard Helms of Washington, D.C., founded a group called CONCERN, INC. to create a market for recycled paper. Over 150 House members have placed orders for recycled paper with the House of Representatives Office Supply Service. Senator Frank Moss has introduced a bill to require the *Congressional Record* be printed on recycled paper. This could remove 20 million tons of waste paper a year. Gov. Reuben Askew of Florida asked all his department heads to start using recycled paper. *Conservation News* has long contained this statement, "printed on recycled paper, please recycle information."

And an extra thought: How much paper could be saved a year if all advertising matter could be printed on BOTH sides of a page?

Winter Reading

Often asked to recommend books, these are the books I return to again and again for information and inspiration:

North With the Spring, Edwin Way Teale *Sand County Almanac*, Aldo Leopold
A Field Guide to the Birds, Roger Tory Peterson *Maine Woods*, Henry David Thoreau
Birds of North America, Robbins, Bruun, and Zim *Wake Robin*, John Burroughs
Gray's Manual of Botany, Eighth Edition, Merrit Lyndon Fernald
Textbook of Ecology, First Edition, Eugene Odum
Deciduous Forests of Eastern North America, E. Lucy Braun
Natural Gardens of North Carolina, B.W. Wells
Complete Guide to American Wildlife, Henry Hill Collins Jr.
Field Guide to the Butterflies, Alexander Klotts
Birds Nests, a Field Guide, Richard Headstrom
American Wildlife and Plants, Martin, Zim, and Nelson
A Guide to the Vascular Flora of the Carolinas, Radford, Ahles, and Bell



General Field Notes

James F. Parnell

Bald Eagle at Raleigh, N.C.

ROBERT J. HADER

North Carolina State University, Raleigh, N.C.

31 March 1971

An immature Bald Eagle was seen at Lake Benson, about 7 miles S of Raleigh, N.C., on several occasions in early February 1971. It was first observed on 6 February 1971 by T.L. Quay and R.J. Hader, who saw it in flight and then perched in a large pine. Mottled white feathers near the base of the tail were noted as it flew, though it was otherwise completely dark. On the following day, Harry and Edmund LeGrand saw it at the same location, and Mike Browne found it again on 10 February. However, a thorough search of the area by the N.C. State University ornithology class on 12 February and subsequently for several weeks failed to locate the bird.

The Bald Eagle has been recorded at Raleigh on numerous occasions in September and in late April or early May, though none have been seen in the last 5 years. There is a record for 11 December 1944 (*Chat*, 9:44), and Funderburg's Ph.D. thesis* (N.C. State University Library) indicates that one was seen 11 February 1945.

Lake Benson, the site of the current observation, is an approximately 500-acre reservoir surrounded by pine and mixed hardwoods and having an extensive swampy area at its head. The wintering waterfowl population includes 500 to 600 American Coots, several hundred Ring-necked and Ruddy Ducks as well as smaller numbers of surface feeding ducks, and Pied-billed Grebes.

* Funderburg, John B. "The Populations, Habitat Relations and Ecological Changes in the Winter Birds of the Raleigh, N.C. Region 1880-1959", Ph.D. thesis, N.C. State University Library, 1959.

Breeding Record of a Piping Plover On Shackleford Banks in North Carolina

JOHN O. FUSSELL III

1412 Shepard Street, Morehead City, N.C.

15 March 1971

On 5 and 6 June 1970 Thomas L. Quay, Frank L. Chapman, and I conducted a population survey on bird nesting islands in Carteret County, N.C., by means of boat and airplane. One of our boat stops on 5 June was on Shackleford Banks, near Beaufort

Inlet. Immediately after landing we heard and then saw an adult Piping Plover that seemed disturbed by our presence. We began to search for eggs or young, and in a few minutes, Chapman found a single young bird nearby. It ran well as it and the adult made their way westward along the sound shore.

All three observers are familiar with Piping Plovers, and with the differences between Wilson's and Piping Plovers, e.g., voice, general coloration, size and color of bill.

This breeding record appears to be only the second published from North Carolina since 1902, when Piping Plovers were last known to breed at Pea Island (*Birds of North Carolina*, 1959). Henry A. Hespenheide found Piping Plovers nesting near Ocracoke, N.C., on 10 through 12 June 1960 (*Chat*, 25:17). The Shackleford Banks breeding site apparently is the southernmost for North Carolina and the eastern United States.

A First Record for South Carolina: Black-headed Gull Photographed

FREDERICK M. PROBST

P. O. Box 386, Pawley's Island, S.C.

16 December 1970

At about 1600 on 29 October 1970, I was birding at Huntington Beach State Park. The day was gray and rainy, and a strong northeasterly wind had been blowing for several days. The temperature was in the low 70s. I was watching gulls, terns, and wading and shore birds from the causeway that separates the fresh water lake from the tidal marsh area. At this time, I first saw what I subsequently identified as a Black-headed Gull (*Larus ridibundus*).

When the lake is high, as after the recent heavy rains, three culverts drain it into the tidal marsh. At the main culvert, during periods of low tide, fresh water keeps a pool filled and well attended by gulls, terns, and other birds that can secure a meal from the many fish forced to concentrate here. It was at this pool, with its huge outpouring of water from the lake, that I observed what, at first glance, appeared to be a Bonaparte's Gull (*Larus philadelphia*). In the rather poor light, the posture of the gull on the water and the black spot behind the ear gave it the appearance of a Bonaparte's. However, on closer observation this bird appeared different. It was noticeably larger than a Bonaparte's Gull, but more particularly, it had a larger bill which was yellow with a black tip. Since it was only 20 to 30 feet from me, I had an excellent opportunity to study it at close range. Swimming against the outpouring current, bobbing about in the water, its every action was like the more familiar Bonaparte's.

A quick trip home to get my camera and my wife, Renee, as a witness, and I returned to take some photographs. Although the day was dark and my equipment quite basic, several recognizable photographs were secured.

After consulting both Peterson's and Robbin's field guides and the National Geographic's *Water, Prey and Game Birds*, we are of the definite opinion that we saw a Black-headed Gull. On one occasion a readily identifiable Bonaparte's Gull was in the same area and afforded an excellent comparison as to size, bill color, and general appearance.

I saw the bird several times after the initial sighting. It was also seen by James S. Houghton of Montreal, Quebec. Mr. Houghton is a birder of about 40 years experience and it is his opinion that the bird is as described. The larger size, the bill size and coloration, the wide black band on the tail with a barely perceptible white margin terminally, the more white in the leading edge of the upper wing surface, pale reddish tinged legs and feet, all point conclusively to this bird being a *Larus ridibundus*. When in the company of the many Herring, Ring-billed, and Laughing Gulls, this one remained apart and independent from the others. It exhibited aggressive behavior toward the

Bonaparte's Gull when the latter was in the vicinity. On later occasions when seen, it was always alone, seemingly shunning the other gulls.

There is no listing of the Black-headed Gull in *South Carolina Bird Life*. The Charleston Museum has no records of prior sightings in its files. I can only conclude that it is an extremely rare visitor to this more southerly Atlantic coastal area. This description could very well be the only recorded sighting of *Larus ridibundus* in South Carolina.

[Dept. Ed.--Several color photographs were submitted with this note. While all were recognizable, they were not suitable for printing. These photographs were submitted to Chandler S. Robbins, Chief of Migratory Non-Game Bird Studies for the U.S. Fish and Wildlife Service for confirmation. He concurs with the identification of the bird as a Black-headed Gull, as does Roxie Laybourne of the U.S. National Museum. Two of the photographs were retained for the National Photoduplicate File and were given accession numbers 55.1-1Ca and 55.1-1Cb. On the basis of this report and the availability of photographs, this species can now be placed on the official South Carolina bird list.]

Notes on the Gull Population At Roanoke Rapids Lake, N.C., Winter 1970-1971

JOSEPH MERRILL LYNCH

539 Henry Street, Roanoke Rapids, N. C. 27870

1 March 1971

A very interesting gull population exists at Roanoke Rapids Lake, a man-made reservoir just north of Roanoke Rapids, N.C., extending westward about 9 miles to where Lake Gaston is formed, and situated only about 6 miles S of the North Carolina-Virginia state line. All the observations at the lake in this study were made in the winter of 1970-1971 at the V.E.P. C.O. dam forming Roanoke Rapids Lake near the northern city limits of Roanoke Rapids.

At Roanoke Rapids Lake I have found three species of gulls this winter season: Ring-billed (*Larus delawarensis*), Herring (*Larus argentatus*), and Bonaparte's (*Larus philadelphia*). Of these three, the Ring-billed Gull is by far the most abundant with the Herring Gull second in numbers. The Bonaparte's Gull was seen only occasionally in the winter.

At Roanoke Rapids there are two distinct Ring-billed Gull feeding populations: (1) a resident population that remains at the lake all day and obtains food directly from the lake, and (2) a population that commutes back and forth from the lake to other feeding areas. The second population of Ring-billed Gulls roosts on the lake at night, returning to feeding grounds in the morning. They remain at these feeding areas (plowed fields) all day and by late afternoon begin returning to the lake for the night.

On the afternoon of 14 January I counted 3,146 Ring-billed Gulls as they arrived at the lake in line and V formation between 4:00 and 5:30 P.M. The resident population of Ring-billed and Herring Gulls of between 150 to 200 individuals is not included in that remarkable total for an inland location. Only Ring-billed Gulls visit the fields. All the Herring Gulls (population average during January: 10 to 15 birds) remained at the lake or along a portion of the Roanoke River.

Gulls flying to the lake in late afternoon come from two different directions. Approximately 80% of the gulls approach the lake at the dam from the east-northeast. These birds are coming from somewhere in Northampton County and possibly from as far away as Virginia. The remaining 20% come from the south-southeast, from the direction of Roanoke Rapids.

On the afternoon of 16 January Bill Collier and I discovered a flock of about 100 Ring-billed Gulls feeding in a plowed field about .5 mile S of Roanoke Rapids Lake. We watched the birds from close range but were unable to determine what they were feeding

on. Later that day we found a second flock of 125 Ring-billed Gulls in a field with a group of pigs. The gulls apparently were benefitting from this relationship in much the same way as Cattle Egrets do from livestock. The gulls would feed where the pigs had uprooted the ground. I have never heard of such an ecological relationship existing between gulls and farm animals in this way before.

From these two observations, I have made an educated guess that all the gulls I have seen commuting to and from the lake have been feeding in fields surrounding Roanoke Rapids Lake; however, I do not know how far these gulls range in search for food.

In summary, there are two feeding populations of gulls at Roanoke Rapids Lake. The first group, numbering from 150 to 300 individuals are apparently able to obtain sufficient amounts of food from the lake and do not regularly leave it. The second group, the great majority of the gulls, resort to other feeding areas. These gulls use the lake not for food, but as a resting place at night.

High Altitude Occurrences Of the Belted Kingfisher In Haywood County, N.C.

MARCUS B. SIMPSON JR.
P.O. Box 167, Statesville, N. C.

21 April 1971

Pearson, Brimley, and Brimley (1942) stated that the Belted Kingfisher (*Megaceryle alcyon*) is widely distributed throughout North Carolina during most of the year; but no mention was made concerning altitudinal limits in the mountain regions. Stupka (1963) reported that the species was rarely observed above 3,000 feet in the Great Smoky Mountains, and he mentioned a total of only five records above that elevation. Ganier (1926) also regarded 3,000 feet as the upper limit at which the species regularly occurred, and he noted that no nesting burrows had ever been found above that altitude. Stupka (1963) reported the sighting of a single bird at Black Camp Gap (4,522 feet) on 31 July 1934, and this appears to be the highest elevation at which the species has been recorded in the southern Appalachians.

Located high in the mountains of southeastern Haywood County, N.C., Yellowstone Prong of the East Fork Pigeon River flows through a massive, mile high hanging valley known as Graveyard Fields. This high, flat basin and the ranges which encircle it were once covered with a mantle of Fraser fir (*Abies fraseri*) and red spruce (*Picea rubens*); but a devastating forest fire in November 1925 destroyed over 25,000 acres of this virgin Canadian zone forest, leaving open grassy fields infiltrated by an open, mixed, early growth of Catawba rhododendron (*Rhododendron catawbiense*), serviceberry (*Amelanchier laevis*), mountain laurel (*Kalmia latifolia*), blueberry (*Vaccinium* sp.), winterberry (*Ilex montana*), yellow birch (*Betula lutea*), fire cherry (*Prunus pensylvanica*), and red maple (*Acer rubrum*).

On 5 October 1969 I saw an adult male Belted Kingfisher at an elevation of 5,100 feet along Yellowstone Prong approximately 200 yards above Second Falls. The bird was flying upstream near the Graveyard Fields trail system maintained by the Blue Ridge Parkway. Although I have not seen the species in this area on any other occasion, Charles F. Hutchinson (pers. com.) noted a pair of kingfishers on Yellowstone Prong at Upper Falls (5,320 feet) on numerous occasions in June 1965. Although the behavior of the pair suggested the possibility of breeding, Hutchinson was unable to locate a burrow or any other positive evidence of nesting.

This appears to be the highest elevation at which the Belted Kingfisher has been recorded in the southern Appalachians. Furthermore, Hutchinson's observations suggest the possibility that the species may breed in this region. Observers should remain alert to

document any additional sightings and breeding evidence from the Yellowstone Prong area, which is easily accessible on foot from the Blue Ridge Parkway.

LITERATURE CITED

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Stupka, A. 1963. Notes on the birds of Great Smoky Mountains National Park. University of Tennessee Press, Knoxville.

Say's Phoebe at Eastover, S.C.

ANNIE RIVERS FAVER
Route 2, Eastover, S.C.

15 February 1969

Early Saturday morning, 18 January 1969, Mrs. Emma Walker and Mrs. Jay Zimmerman came down from Columbia for a day of birding in lower Richland County. Between the Wateree and Congaree Rivers are broad flat fields at that time having just been planted with grain or in which grain was just coming up. This was an ideal area for sparrows and pipits and many other ground birds. Hawks were also present, particularly Marsh Hawks. Many flocks of blackbirds darkened some fields.

We had ridden in a wide circle, and at about 4:30 PM came to the J.C. Lanham pastures. We stopped at the watertrough to look for Brewer's Blackbirds. One large oak tree is by the roadside, with a vacant house nearby, around which was a low fence. On one of the posts was a phoebe. We sat and watched as it flew from post to post, then realizing that there was something decidedly different about this bird, we got out of the car and followed the bird from one side of the house to the other, thus getting to see it from every angle in the sunlight. The rusty underparts were clearly seen from the front, with the dark head and tail with lighter back visible from the rear. It was much too brown for our eastern bird. Having with us the book, *Birds of North America* by Robbins, Bruun, and Zim, we identified the bird as a Say's Phoebe (*Sayornis saya*). We did not hear its call, but it bobbed its tail in the typical phoebe manner.

[Dept. Ed. -- This appears to be the first record of this western flycatcher in South Carolina. There is also a single record from Wake County, North Carolina (*Chat*, 30:28-29), which also summarizes the bird's occurrence east of the Mississippi River. While collections or photographs are always desirable to verify unusual sightings, careful observation by three capable birders certainly gives considerable weight to this observation which has been accepted by Burton in the revised edition of *South Carolina Bird Life* published in 1970. Say's Phoebe can now be placed on the Carolina Bird Club's hypothetical list for South Carolina.]

Traill's Flycatcher at Chapel Hill, N.C., in Breeding Season

JAMES O. PULLMAN
Route 6, Box 149, Chapel Hill, N.C. 27514

30 August 1971

On 6 June 1971 I found a Traill's Flycatcher (*Empidonax traillii*) singing steadily at Mason Farm near Chapel Hill, N.C. The song was of the "fitz-bew" variety. The bird was observed again on 12 and 19 June. The usual perch was in willow trees growing between multiflora rose hedges on either side of a wet ditch, surrounded by weedy fields. When last noted on 19 June, the songs were much less frequent; and the bird could well have remained in the area undetected for the rest of the summer.

The bird was once seen in vigorous conflict with a pair of chickadees, suggesting territorial defense. Speculatively, the bird was a male who established a nesting territory

and subsequently abandoned it when no mate was forthcoming. The only previous North Carolina breeding season records for this species of which I am aware are those of Wendell P. Smith at North Wilkesboro (e.g., *Chat*, 34:109).

[Dept. Ed. — See the related article in this issue.]

Trail's Flycatchers at Raleigh, N.C., in Summer

HARRY E. LeGRAND JR.

EDMUND K. LeGRAND

331 Yadkin Drive, Raleigh, N.C.

18 September 1971

On the afternoon of 26 May 1971 we observed a singing Trail's Flycatcher (*Empidonax traillii*) at leisure in a briery and bushy thicket just east of Lake Raleigh in Wake County, N.C. Because the spring migration across North Carolina was late this year, we assumed that the bird was a late transient.

We visited this area regularly beginning in mid-June, and not only found one Trail's Flycatcher, but a total of five birds. Four of the birds were males, all singing the "fitz-bew" song and apparently on territory. An intensive study of one of the males revealed an apparent mate that was very shy and occasionally associated with the singing male. This pair was watched carefully for the next month but no nesting evidence was found. The other three males were not as thoroughly studied, and no females were found with any of them. The flycatchers were last heard singing on 10 July, but their "weet" or "wit" call was heard much of the summer. The last date we saw the species at Raleigh was 3 August. All of the birds were in two bushy thickets and along a willow-lined creek in an area about 20 acres in size.

North Wilkesboro is the only known nesting locality for the Trail's Flycatcher in North Carolina. However, this species has recently been found in the summer of 1969 near Franklin (*Chat*, 35:55) and at Chapel Hill in 1971 (*Chat*, in press). Also single birds were recorded on Breeding Bird Surveys near Brevard in 1968 and 1969 by Elizabeth Ball (data supplied by the Migratory Bird Populations Station, Laurel, Md.). In late May 1971, Robert J. Hader (pers. com.) saw and heard several birds calling in typical nesting habitat along the French Broad River at Brevard. All of these records indicate that this species is increasing in the state in summer. More field work is needed to determine whether or not this flycatcher is actually nesting at these new localities and whether or not the Raleigh and Chapel Hill birds are an isolated population away from the mountains.

American Redstart Nesting In Sumter County, S.C.

JAY SHULER

43 Kirkwood Lane, Greenville, S.C. 29607

18 July 1971

On 16 July 1971 William Zimmerman, Evelyn Dabbs, and I observed a male American Redstart (*Setophaga ruticilla*) singing in the swamp on the north bank of the Wateree River, just inland from its juncture with the Congaree River. He was feeding actively and chased a Blue-gray Gnatcatcher and a Parula Warbler. When it became obvious that he was not taking food to young, we began to "squeek" and imitate the call of the Screech Owl. After a few minutes a female redstart appeared, closely followed by a well-feathered immature. The young bird was much grayer than the adult, and its tail seemed not quite fully developed.

In view of the note published by Bruce A. Mack (*Chat*, 33:104) of a female redstart building a nest in adjacent Richland County, this observation may be taken as evidence that the American Redstart breeds regularly in this area.

BRIEFS FOR THE FILES

Compiled by ROBERT P. TEULINGS
Route 2, Chapel Hill, N.C. 27514
(All dates 1971)

- COMMON LOON:** One in winter plumage was still present off Pea Island on 9 July, Gilbert Grant; three were off Elijah Lump near Morehead City on 21 July, John Fussell; and one was at Cedar Island Refuge (N.C.) on 15 July, Roger Steiner. An individual was noted inland on Roanoke Rapids Lake, Halifax County, N.C., on 14 August by Merrill Lynch.
- RED-THROATED LOON:** Five, along with a Common Loon, were offshore at Atlantic Beach, N.C., on 15 July as reported by Edward J. Reimann. Two were present on that same date at Cedar Island, Roger Steiner; and one was at Bird Shoal near Morehead City on 3 August, John Fussell.
- HORNED GREBE:** One was rather late at Cedar Island Refuge on 4 June, Roger Steiner; and one remained at Smith Island, N. C., as late as 14 June, James Parnell.
- PIED-BILLED GREBE:** A late migrant was seen at Highlands, N.C., on 29 May by Robert Hader, Harry LeGrand, and Edmund LeGrand. Evidence of breeding was noted at three coastal locations this summer. Gilbert Grant counted 14 adults and located 6 nests (4 empty, 2 with eggs) at the West Onslow Beach (N.C.) impoundment on 10 July. Ten birds including two young were seen at Huntington Beach State Park, S.C., on 18 July by Merrill Lynch. An adult and two juveniles were found at Long Beach, N.C., on 24 July by Harry and Edmund LeGrand.
- GREATER SHEARWATER:** One was sighted on 11 June off Charleston in the vicinity of C-2 buoy by Dennis Forsythe.
- AUDUBON'S SHEARWATER:** A crippled bird was found on Bird Shoal at Morehead City 30 July by John Fussell.
- WILSON'S PETREL:** Six were seen in the vicinity of C-2 buoy off Charleston on 11 June by Dennis Forsythe.
- CATTLE EGRET:** Three were seen in early summer, 3 July, at Raleigh by Harry and Edmund LeGrand.
- LEAST BITTERN:** One was found inland near Ringwood in Halifax County, N. C., on 7 July by Merrill Lynch.
- WHITE IBIS:** Harry LeGrand recorded an immature at Raleigh on 3 August.
- BLACK DUCK:** One was an unexpected summer visitor at Chapel Hill, N.C., on 16 and 17 July, James Pullman. On the coast, evidence of breeding was noted at West Onslow Beach impoundment where an adult and 4 young were seen on 10 July by Gilbert Grant.
- GADWALL:** Two were seen at Lake Raleigh in Wake County, N.C., on 13 and 15 June by Chris Marsh; Robert Hader and Harry LeGrand found one still present there on 10 July. Four were found at West Onslow Beach on 10 July by Gilbert Grant, the first summer record for that locality.
- WHITE-RUMPED SANDPIPER:** A late spring migrant was found inland at Raleigh on 13 June by Chris Marsh. On the coast about 20 were seen in the Bodie Island area on 13 and 14 June by Harry LeGrand, and up to six were present at Bird Shoal off Morehead City from early June through early July as reported by John Fussell and Peter Graham.
- AMERICAN AVOCET:** Four birds in breeding plumage were seen at Bodie Island, N.C., on 9 July by Gilbert Grant; and Ted Beckett reported avocets present through the summer on South Island, S.C. Although observers have been looking for nesting evidence at these sites, the species has not been found breeding.
- BLACK-NECKED STILT:** Breeding activity was noted at West Onslow Beach impoundment where Gilbert Grant found six nests (2 with eggs, 4 empty) on 9 July.

WILSON'S PHALAROPE: A female in breeding plumage was seen on 6 June in the Savannah River Refuge, Jasper County, S.C., by Calvin Zippler and Gerald Knighton.

NORTHERN PHALAROPE: A female in breeding plumage was found at Bird Shoal off Morehead City on 11 July by John Fussell and Donna Goodwin.

GREAT BLACK-BACKED GULL: Roger Steiner counted 38 summering birds on 15 July at Cedar Island Refuge.

COMMON TERN: Three pairs nested successfully on Bird Key near Charleston, Ted Beckett.

BLACK TERN: One was seen at Elijah Lump off Morehead City on 20 June, a month before the start of the regular fall migration, John Fussell, Peter Graham, and T.L. Quay. Another early migrant was seen inland at Lake Wheeler near Raleigh on 8 July by Robert Hader.

BLACK-BILLED CUCKOO: Mark Simson reported sighting a single bird near Chapel Hill on 4 August.

SAW-WHET OWL: Two birds were heard calling early on the morning of 13 April at Lake Gaston, Warren County, N.C., by Henry Haberyan.

HORNED LARK: A small colony was present through the summer at Roanoke Rapids airport in Halifax County, N.C. Several juveniles were seen there in July, indicating that nesting occurred, Merrill Lynch.

CLIFF SWALLOW: On 9 June James Pullman counted about 20 birds circling above High Rock Bridge at Tuckertown Lake in Stanly County, N.C. Nesting activity was first reported at this site in 1967 (*Chat*, 31:72).

BEWICK'S WREN: One was observed singing on territory at 5,300 ft. elevation on the Blue Ridge Parkway near Mt. Pisgah, 28 to 31 May, by Robert Hader, Harry LeGrand, Edmund LeGrand, and others.

ROBIN: Nesting apparently occurred within 2 miles of the coast in Carteret County, N.C., where a pair was found with fledglings at Morehead City Country Club in June by John Fussell. This record is of interest because Robins are uncommon summer residents in the eastern section of the state and their breeding status near the coast is not well defined.

BLACK-AND-WHITE WARBLER: One was found in northeastern Tyrrell County, N.C., on 15 June by Harry LeGrand; another was seen in late June at Mann's Harbor, N.C., by Glen Mahler; and several were noted during the summer in Croatan National Forest by John Fussell. Breeding season records from the coastal plain have been rare.

WORM-EATING WARBLER: Harry LeGrand found singing males at three different stations in NE Tyrrell and NW Dare Counties, N.C., on 15 June.

CANADA WABLER: A late spring migrant was banded at Hillsborough, N.C., on 1 June by Charles Blake.

AMERICAN REDSTART: An adult male was seen on 27 June at Great Lake in Croatan National Forest, Craven County, N.C., by John Fussell. Summer occurrences were also recorded in South Carolina east of the fall line where single males were seen in two areas along the Wateree River in Sumter County on 16 and 17 July by Jay Shuler, Evelyn Dabbs, Lee Jones, and others.

SCARLET TANAGER: A male and female were seen along Fishing Creek near Ringwood, N.C., in the SW corner of Halifax County in late June and early July, indicating possible breeding in that locality, Merrill Lynch. An adult male visited Eloise Potter's yard near Zebulon, N.C., on 29 July.

AMERICAN GOLDFINCH: Gerald Knighton found a male and female at Savannah Refuge in Jasper County, S.C., on 17 July and later saw a male at the same location on 8 August. Goldfinches are rare summer residents on the South Carolina coast.

BACHMAN'S SPARROW: Five birds, including a juvenile, were found on the grounds of McKinney Fish Hatchery in the North Carolina Sandhills, Richmond County, on 7 July by Jay Carter and Robert Teulings.

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